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REPORT

ON THE

INVESTIGATION

OF

INDIGENOUS DRUGS

BY

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R.C. No. 33.

From

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HONORARY PHYSICIAN, GENERAL HOSPITAL, AND OFFICER
IN CHARGE OF INVESTIGATION INTO INDIGENOUS DRUGS,
MADRAS.

To

THE HON'BLE THE SURGEON-GENERAL
WITH THE GOVERNMENT OF MADRAS,
MADRAS.

SIR,

I have the honour to submit the report on the investigation into indigenous drugs from 12th July, the date of my assuming charge of the office, to 31st October 1918.

2. *Preliminary work.*—To get an insight into the nature of the work I had to carry out, I considered it necessary that I should acquire a preliminary knowledge of the properties of some of the drugs and their compounds by acquainting myself with what was stated about them in some of the well-known Ayurvedic works and by observing practically their methods of preparation, application and administration. The works of U. C. Dutt, K. L. Dey, Pharmacographia Indica, Mohideen Sheriff's works, N. N. Sen's Ayurveda, Susruhta (English translation), Charaka (Malayalam translation) and several Ayurvedic compilations in Malayalam were of much help to me in conducting my investigation. As for the practical portion of my work, I made it a point to visit the local Ayurvedic dispensaries as often as possible and to observe and note what was being done in those institutions. During these visits, I was able to gather information with regard to the methods adopted in the preparation of drugs and their compounds, methods of diagnosing diseases and also the various methods of treatment. The apparatuses which are used in the Ayurvedic pharmacies are all antiquated and require considerable modifications in the light of modern scientific knowledge. Those who practise Ayurveda in the city with a few exceptions were all willing to help me in conducting my investigations. I cannot say the same of the Unani physicians; with the exception of Hakim Shiffai-ul-mulk Zianalabhdheen Sahib Bahadur and Hakim Maghddum Asaraff Sahib Bahadur, who were kind enough to give me a few prescriptions, they were either reticent or unwilling to render any help. One of the Unani hakims when asked by the Surgeon-General, if he would divulge the composition and method of preparation of any of his secret remedies, replied that he could not afford to lose his living by such a procedure. No doubt the Surgeon-General admired him for the courage of his conviction, but at the same time was sorry to see even in a venerable hakim an agent to debase the ethics of a noble profession. As my knowledge in the theory and experience in the practice of Ayurveda were not sufficient to enable me to prescribe medicines for diseases, I had to select suitable patients at the General Hospital, to whom to fit the medicines which I was gradually collecting. The selection of cases was a difficult task which any one can easily understand when one had to find diseases to suit medicines. This work of investigation cannot be well conducted in an out-patient dispensary, as it would be difficult to trace the whereabouts of the patients for purposes of correctly noting

results. My thanks are due to the Medical officers of the General Hospital for their kindness in placing under my treatment patients whom I wanted to treat with Ayurvedic or Unani medicines. I have also to thank Vaidya Ratna Pandit D. Gopala Acharlu and Pandit Kannappa Mudaliyar for several free samples of medicines given by them for experimental purposes. I am obliged to the staffs of the local Ayurvedic dispensaries for permitting me to observe the work done in those institutions, although at times my visits must have inconvenienced them to some extent. I have devoted my attention chiefly to studying the therapeutical actions of the drugs and of compound preparations in general use, which I have been able to collect. To make a pharmocological research into these, would require a well-equipped laboratory with a staff of duly-qualified and competent physiologists and chemists who have had a previous training in such work. Even the work of investigation which I am now doing, viz., a study of the therapeutical actions of the drugs of Ayurvedic and Unani systems, will take at least two or three years before it is completed. I therefore request that I may be permitted to submit annual reports on it. The work here has been sufficient to keep me fully engaged and there is still enough of material for further investigation. I have not therefore been able to go on tour hitherto, but as recently the services of a Sub-Assistant Surgeon and a small staff have been sanctioned for me, I intend touring in the districts shortly for collecting materials for investigation.

3. Seven annexures are appended to this report—

(1) Notes on drugs and compounds which have been investigated.

(2) Summary of the notes on medicines investigated, found useful and recommended for further trial.

(3) The composition and the methods of preparations of those mentioned in No. (1).

(4) The composition and the methods of preparation of the drugs collected but not investigated.

(5) Statement showing the diseases treated at the General Hospital with Ayurvedic medicines and results.

(6) Chemical Examiner's report on analysis of drugs.

(7) Copies of circular letters sent to the District Medical and Sanitary Officers and Civil Surgeons.

(8) Copies of circular letters sent to the Collectors of districts.

4. In selecting diseases I have generally avoided taking up for Ayurvedic treatment very serious cases, as, as a novice, I did not wish to bring the method of treatment into disrepute.

5. I would suggest that the drugs and compounds whose properties have been already investigated by me and found efficacious may be given a fair trial in the various hospitals in the Presidency and reported upon by the Medical officers in charge.

6. When investigation into a fairly large number of drugs has been completed, I shall submit a statement showing the comparative values of the drugs investigated by me and those already in use.

7. In conclusion, I have to state that I began this work with much diffidence and that the mental strain involved in conducting it was considerable. I have therefore to thank Major-General G. G. Giffard, C.S.I., I.M.S., for his kind advice on many occasions and for encouraging me in every way in the conduct of these investigations.

I have the honour to be,

Sir,

Your most obedient servant,

M. C. KOMAN,

Honorary Physician.

APPENDIX I.

Properties and actions of the drugs and compound preparations administered to patients up to the date of the report.

SINGLE DRUGS.

1. *Mocharas*—Bombax Malabaricum—
   Natural order—Malvaceæ.
   Sanskrit—Salmili.
   Tamil and Malayalam—Mullilavamaram.

This is the gum obtained from Bombax Malabarieum (vide prescription No. 4).

Therapeutic uses.—This gum is an astringent, demulcent and hæmostatic. This was tried in two cases of chronic dysentery, in hæmoptysis of pulmonary tuberculosis and influenza, hæmatemisis, malæna and menorrhagia and acute dysentery with very beneficial results. The blood disappeared from the vomited and purged matters in two or three doses of 40 grains each, but in acute and chronic dysentery its action was slow and had to be accelerated by the addition of other drugs like holarrhena anti-dysenterica, pomegranate rind, etc.

Chemical composition.—When macerated in water this gum affords a reddish brown solution which gives a dirty greenish precipitate with ferric salt. The solution contains a little gum precipitated by alcohol. The bulk of the drug remains undissolved (Pharmacographia Indica).

2. *Bamboo Manna*—Bambusa Arundinaceæ—
   Natural order—Gramineæ.
   Sanskrit—Vanslochana.
   Tamil—Mungalluppu (vide prescription No. 3).

The sileceous concretions found in the joints of the femalo bamboo (bambusa arundinaceæ). Tabasheer is its Hindustani name. Small irregularly-shaped fragments of opaque white or bluish opalascent colour. The larger pieces are concave or convex and have evidently derived their form in the joints of the bamboo in which they are found as deposits.

Therapeutic action.—It is said to possess cooling, tonic and aphrodisiac properties and is given for the relief of asthma, cough of consumption and in hectic fever with cough.

It enters into the composition of numerous prescriptions for the affections of the lungs; two of the most common are Sithopaladi churnam and Talisyadi churnam.

The latter vide prescription No. 3 (*b*)—has been tried by me in pulmonary tuberculosis, in intestinal tuberculosis with hectic fever, in acute and chronic bronchitis and in bronchitis following influenza. It gave a certain amount of relief in pulmonary tuberculosis and in bronchitis in allaying cough, but the action was very slow. It did not have any effect on the hectic fever of tubercle. A case of bronchitis after influenza was benefited by its use.

3. *Veppalai*—Holarrhena anti-dysenterica—
   Natural order—*Apocynaceæ.*
   Tellicherry or Conessi bark. Sanskrit—Kutaja (vide prescription No. 7).

The bark of this tree is one of the most important articles in the Hindu Materia Medica and is said to possess astringent, digestive and expectorant properties. It is given either alone or in combination with other astringent drugs in cases of acute and chronic dysentery, in piles, in painful dyspepsia and chronic chest affections such as asthma, also in colic and diuresis. The seeds or veppala-arisi are considered to be astringent, anthelmintic, carminative and febrifuge. The expressed juice of the bark is considered to be more efficacious in acute cases of dysentery than the bark or the seeds. The bark and seeds are usualy combined with other medicines, for example, Kutaja arishtam, Kudaja panitham, Dadhumashtaka churnam. I have found its compound preparations useful in cases of acute and chronic dysentery and chronic diarrhœa.

The action of the seeds when uncombined was found to be very slow. In a case of chronic dysentery of long duration in which amæbæ were found in the stools, a compound preparation of Kudaja with Salmili brought about a gradual cure.

Chemical composition.—The bark and seeds contain a basic substance named wrightine which has a bitter taste and forms uncrystallisable salts with dilute acids.

4. *Cleome viscosa*—
   Natural order—Capparidiæ (vide prescription No. 9).
   Sanskrit—Adithya Bakhtha.
   Tamil—Nayi-Velai.

The seeds of this plant are said to possess anthelmintic and rubefacient properties. Mohideen Sheriff recommends the pure dried seeds as substitute for santonin. The dose recommended is half to one drachm for adults and half the quantity to children to be given twice a day for two days and followed on the third day by a dose of castor-oil. I tried the drug as per directions given above in an adult and in a child whose motions contained large number of round worm ova, but the result was negative in both the patients.

5. *Aconitum Heterophyllum*—
Natural order—Ranunculaceæ.
Sanskrit—Ativisha
Tamil—Atividyam (vide prescription No. 12).

I found it difficult to get the tuberous roots (adividayam) of this plant in a pure state from the Madras bazaars. The pure roots should break with a short starchy fracture, should taste bitter without producing any acridity and tingling sensation of the tongue. The pure drug was obtained from Malabar and tried in a case of acute dysentery and in a case of chronic enteritis. In both these cases, 30 grains of the drug were rubbed up in two ounces of buttermilk and given twice a day. Eight doses were sufficient to cure the acute case, the diet being arrowroot and milk. It took three weeks for the case of chronic enteritis to get well, the patient being all the time on a diet of well-boiled rice and curd. Mohideen Sheriff recommends its use as an antiperiodic in two drachm doses. The appetite of the patients improved under its use. I consider it a valuable drug in commencing acute dysentery. It enters into several compound preparations for dysentery and diarrhœa with fever.

Chemical composition.—Two uncrystallizable alkaloids are stated to be present in the root one of which is atisine. The other substances present are aconitic acid, tannic acid, cane sugar, fat, starch and vegetable mucilage.

6. *Adhatoda Vasica*—
Natural order—Acanthaceæ.
Sanskrit—Vasaka.
Tamil—Adathoda.
Malayalam—Adalodam (vide prescription No. 10).

This plant is found in most parts of India. The fresh juice or decoction of the leaves or a decoction of the root (vide prescription) is generally administered as an expectorant and antispasmodic in asthma, chronic bronchitis and consumption. The decoction of the roots is generally given combined with other expectorants. This decoction was given in half a dozen cases with varying results. It did good in cases of chronic bronchitis but had not the slightest effect in pulmonary tuberculosis; on the other hand its use for a few days brought on an attack of hæmoptysis in a case of pulmonary tuberculosis. Indian physicians especially on the west coast have high opinions of its efficacy in all pulmonary affections. It is useful in bronchial affections. The leaves are stated to contain an alkaloid known as vasicine in combination with an organic acid to which Dymock gives the name of adathodicacid.

7. *Semicarpus Anacardium*—
Natural order—Anacardiaceæ.
English—Marking nut.
Tamil—Sheran kottai.
Sanskrit—Bhallataka (vide prescription No. 8).

This is a common drug in India. The fruit and the acrid oil which can be obtained from the fruit by expression or with the aid of heat with a certain amount of care are used medicinally. Both when used internally are said to be sedative, antispasmodic, nervine, digestive and alterative. Externally the oil is rubefacient and vesicant. Mohideen Sheriff recommends its use in asthma, in secondary syphilis, dyspepsia, piles, neuralgia, epilepsy, leprosy, psoriasis and other cutaneous affections and nervous debility. He says that marking nut is held in high esteem as a therapeutic agent by the Muhammadan practitioners in India, Persia and Arabia. The Ayurvedic physicians use it as a powerful restorative tonic and recommend its use in chronic stomach complaints and diseases of the rectum. The acrid oil may be given in one to two drachms doses mixed with mucilage and sugar or the nut itself may be given in the form of an electuary made by mixing one part of the nut, six parts of the kernel of cashewnut (anacardium occidentale) and one part of clarified honey Dose 1 to 2½ drachms. Mohideen Sheriff considers marking nut as a specific for acute rheumatism and says it is more sure and speedy in its action than salicylate of soda. I treated a patient admitted into the General Hospital for acute rheumatism affecting the large joints with the electuary of marking nuts. He was discharged cured after having had the treatment for two weeks. In cases of chronic rheumatism in which it was given in the wards, the patients did not derive any benefit. I have seen its efficacy in chronic complaints of the stomach, such as ulcer and chronic gastritis. Kalyana ksharam given in the last-mentioned complaints contains marking nut as its principal ingredient.

8. *Withania Somnifera*—
Natural order—Solanaceæ.
Sanskrit—Aswagandha.
Tamil—Ammukkaran kizhangu (vide prescription No. 1).

The root is said to smell like a horse; hence the name Asvagandha.

The specimens I obtained from local bazaars did not possess any such odour.

It is considered a tonic and aphrodisiac by the Indian physicians who use it, in general debility, rheumatism, consumption and loss of appetite A patient with chronic gastritis and marked loss of appetite and general debility was given a full course of the powdered root alone for a few weeks without any benefit. He was then put on aswagantha with vriddhadarak

(Argyria speciosa) which is considered a very good tonic, with the same negative result. A woman with hectic fever of tubercle and marked general weakness was put on the same combination. The result was disappointing. In Indian Materia Medica aswagandha enters into the composition of several medicines used as aphrodisiacs and as remedies for rheumatism.

9. *Ipomea Turpethum*—
(Natural order—Convolvulaceæ.)—
Sanskrit—Trivrit.
Tamil—Shivadavir (vide prescription No. 15).

There are two varieties of the root—the black and the white, the black is a powerful irritant and drastic and should be avoided. The white variety used by Indian physicians is a moderate or mild cathartic. I have used it as a mild hydrogague in the hospital in acute constipation of fevers, chronic constipation, in ascites with cirrhosis of liver, in enlargement of spleen and in all other cases where a purgative was considered necessary. The simple powder in 40 to 60 grains or the compound powder 60 to 90 grains (vide prescription No. 15) may be administered to produce the desired effect. In its action, it is as efficacious if not better than jalap.

Chemical composition.—It contains a resin "turpethine" which is similar in action and properties to jalapin, the resin of jalap. The drug is cheaper than jalap and may be used as an efficient substitute for it.

10. *Eclipta Prostrata*—
Natural order—Compositæ.
Sanskrit—Kesaraja.
Tamil—Karishalanganni

This weed grows in abundance in Madras in the rainy season and may be found in damp places at other times of the year. There are two varieties of the plant—the yellow flowered and the white flowered—the former variety has thicker leaves and are extensively used in catarrhal jaundice. The fresh leaves are well washed, ground with a few pepper corns and a lump of the size of a lime is administered early in the morning in sour curd or buttermilk. I have found this drug very useful in curing the disease when so administered for five or six days. Occasionally a purgative may be required to aid the action of the drug. In its action, it resembles podophyllin and taraxacum. It may be administered in the form of a succus.

11. *Butea frondosa*—
Natural order—Leguminosæ.
Sanskrit—Palasa.
Tamil—Porasam (vide prescription No. 14).

The seeds have been long known to the Indian physicians to be laxative and anthelmintic in their properties and are given by them in combination with Hyoscyamus nigra, Kamala and carminatives to expel intestinal worms. In our practice it is given with small doses of santonin as a compound powder for the expulsion of round worms. In a case where large numbers of ova of round worms were found in the fæces, compound powder of Butea frondosa as per prescription No. 14 was given, but the result was negative. I intend trying hereafter the various reputed anthelmintics used by Indian physicians.

12. *Vanda Roxburghii*—
Natural order—Orchidacea.
(Sanskrit)—Rasna.

A compound decoction of this root is being administered in a case of Hemiplegia as the Indian physicians consider it useful in all nervous diseases and rheumatism. It consists of rasna (vanda roxburghii), fagonia arabica, cedrus deodara, acorus calamus and zingiber officinalis, adhathoda vasica, asparagus racemosus, boerhavia diffusa, etc. It has not given appreciable benefit to the patient.

13. *Guggulu*—
Natural order—Burseraceæ.
Botanical name—Balsamodendron Mukul.
Sanskrit—Guggulu.
Malayalam—Guggulu.

Guggulu or Indian bdellium is obtained by making incisions in the tree through which the gum resin exudes. It is used by Indian physicians in rheumatism, nervous diseases urinary affections and skin diseases. For these purposes it is given in several compound preparations, such as yogorajaguggulu, adithyapaka guggulu, kaisara guggulu, sadhangha guggulu, kanchanar guggulu. I have been administering yogaraja guggulu with rasnadhi quath in a case of hemiplegia without any apparent benefit.

14. *Oxalis corniculata*—
Natural order—Geraniaceae.
Sanskrit—Amlalonika.
Tamil—Puliyarai.

The juice of the leaves of this plant is considered refrigerant, appetising and stomachic. In slight forms of chronic dysentery, the leaves boiled in butter milk and given twice or thrice

a day prove very useful. Chakradatta gives this in the form of a ghrita (means ghee preparation) and recommends its use in dysentery, piles and prolapse of the rectum. The herb can be obtained in abundance at a very cheap rate at all the markets in Madras.

15. *Silajit.* (vide prescription No. 5). The literal meaning of this word is stone and lac. There are two common varieties which can be obtained from the bazaar, gomuthra silajit and Karpoora silajit. Gomuthra silajit has a strong smell of stale cow's urine. It is dark, sticky and unctuous. Karpoora silajit is found in white plates like marble but is less hard. Silajit is a bitumenous exudation from rocks and mountains in the hottest part of the year. On igniting it, it leaves a large quantity of ash consisting of lime, magnesia, silica and oxides of iron. It is said that there are four varieties of silajit. (Vide Kaviraj N. N. Sen's book.) The *four varieties get their hue from the presence of gold, silver, copper or iron in their composition.* Gold silajit is said to be red, the silver variety white, the copper variety of bluish green colour and iron silajit blackish. The only two varieties shown me in the Venkataramana dispensary, Mylapore, were the black and the white. The black variety is the one which is mostly used and is known as gomuthra silajit. An extract is made from the crude substance by making an emulsion of it with hot water and repeatedly exposing the emulsion to the sun. A cream floats on the surface and it is removed and collected. The process is continued as long as any cream rises. The extract of silajit thus collected is sundried and then purified by being soaked in a decoction of certain plants. It is said to be a powerful tonic, useful in urinary diseases, diabetes, gravel and consumption.

The dose is 6 to 12 grains.

I have used this medicine with Abhrak Basmam (vide prescription No. 35) in two cases of diabetes and the action was beneficial. In one case the sugar disappeared completely after three weeks' use although at the commencement of the treatment there were 22 grains to an ounce. In the other case which is still under treatment, the quantity of sugar is reduced from 36 grains to 8 grains per ounce; the accompanying symptoms such as excessive flow of urine, thirst, neuritis of legs, etc., have also subsided to a very considerable extent. Both the patients were on milk and bread diet. Probably the diet has a great deal to account for the reduction of the quantity of sugar. A few years ago I saw a case of chronic cystitis deriving much benefit from the use of silajit which was administered by an Unani Physician.

16. *Sida Cordifolia*—
Natural order—Malvaceae.
Sanskrit—Bala.
Tamil—Mayirmanikam.
Malayalam—Kurundhoti.

V. C. Dutt says that the Sanskrit writers describe four varieties of Bala and the roots of all these species are regarded as cooling, tonic, and useful in diseases of nervous system. The Indian physicians of the west coast use the bark of Sida cordifolia in diseases of the nervous system such as paralysis, sciatica, facial palsy, hemiplegia, vertigo, etc. It is used alone or in combination with other medicines as in mashabalathi kashayam, ksheerabala or bala thaila. Bala thaila is an oil prepared by making a decoction of the bark of Sida cordifolia to which sesamum oil and milk are added in certain definite proportions and boiled. This process is repeated several times by adding fresh milk and a paste of the bark of the root; this is done 14 to 101 times or more. An ounce of 101 times boiled thaila is sold on the west coast at Rs. 3. I have used this specific oil in several cases of facial paralysis, sciatica, both internally and externally and found it to be very efficacious in curing those diseases when they are due to inflammation of the nerves. I have received a supply of this oil from Malabar and intend giving a good trial in suitable cases in the hospital.

17. *Phyllanthus emblica*—
Natural order—Euphorbiacea.
Synonym—Emblic myrabolans.
Sanskrit—Amlaka.
Tamil and Malayalam—Nellikayi.

This is a drug which is held in high esteem equally by both the Unani and Ayurvedic physicians. The fruits are said to possess cooling, refrigerant, diuretic and laxative properties and are considered to be purifiers of the humours of the body. The dried fruits are said to be astringent and useful in hæmorrhages. Unani physicians give a confection made of this fruit—vide prescription No. 41, for anorexia, biliousness, and palpitation of the heart. Hakim Shifa-ul-mulk Zianulabddeen Sahib Bahadur speaks very highly of its property which he thinks depends upon the organic acids present in the fruit. In insanity and other affections of the brain, the dried fruits are boiled over night in water which is allowed to cool and a continuous stream of this water is poured on the head for 15 or 20 minutes to allay the brain irritation.

These myrabolans enter into many compound preparations of Ayurveda. Triphala (3 fruits) which consists of equal parts of powdered emblic myrabolans, chebulic myrabolans and beleric myrabolans is administered as a laxative and corrector of humours, in headaches, biliousness, dyspepsia and constipation, piles, enlarged liver and ascites. Nellikaya leghyam,

confection of Nellikaya (vide prescription No. 41) has been found to be useful in chronic dyspepsia and also as an appetiser. Dymock says that all the three myrabolans contain a large quantity of gallic and tannic acids, emblic myrabolans contain also 10 per cent of glucose.

Chebulic myrabolans are known as abhaya in Sanskrit, kadukhai in Tamil and Malayalam. Beleric Myrabolans are known as vibhitaki in Sanskrit and thandrakai in Tamil and Malayalam.

The Unani practitioners have slightly modified the prescription for Triphala (vide prescription No. 28) and given it the name Ithriphal.

The latter was given in doses of 3 drachms at bed time in a case of chronic constipation and found to give considerable relief.

COMPOUND PREPARATIONS.

I. Karpooradhi Churnam (vide prescription No. 13). This prescription has been used in cases of bronchial catarrh and bronchitis and found to help free expectoration in those diseases. It is prescribed in the Madras Ayurvedic dispensaries in catarrhal bronchitis, laryngitis, nasal catarrh.

II. Talisyadhi and sithopaladhi churnams—vide prescription No. 3 (*a*) and (*b*) and vide notes on Bamboo manna marked No. 2

III. Worm powder—vide prescription No. 14 and vide notes on Butea *frondosa* marked No. 11.

IV. Trivrit churnam—vide prescription No. 15, and vide notes on Ipoemea turpethum marked No. 9.

V. Anandha and swatchanda Bhairavi pills—vide prescriptions Nos 16 and 20.

These pills were used in malarial fever with enlarged spleen and liver along with Panchathiktha decoction or Panchathiktha panakam and with Leghu Sudarsana Churnam or Brihat Sudarsana Churnam. In three cases of malarial fever where diagnosis was confirmed under microscope by the presence of malarial parasites in the blood, the patient was free from fever from 4 to 7 days after the administration of the drug. In one case where the disease was of a malignant type with crescents in the blood, the fever returned in a mild form, after a few days of apyrexia. The treatment is being continued.

VI. Dadhumashtaka churnam—vide prescription No. 18.

This compound was tried in a few cases of acute and chronic dysentery in doses of 30 to 60 grains and found to be very useful.

VII. Leghu Sudarsana Churnam—vide prescription No. 19.
Brihat Sudarsana Churnam—vide prescription No. 23.
Panchathikthaka Panakam—vide prescription No. 26.
and decoction—vide prescription No. 17.

All these have more or less the same properties and are being given in the Ayurvedic dispensaries in Madras in malarial fevers, in malarial enlargement of spleen and liver, in fevers of influenza and bronchitis and other fevers of unknown origin. I have tried these preparations in the hospital in these diseases but they have not proved as efficacious as I expected them to be. They are certainly of use in those diseases, when along with them preparations of mercury, sulphur and Aconite like one of the following pills Anandhabhairavi (prescription No. 16 Swatchandbabhairavi or Kasturibhairavi are administered.

The principal ingredients of these compound powders are Chinthal Kodi (Tinospora cordifolia) Katurohini (Picrorrhizha kurroa), Parpatakam (Oldenlandia herbacea), Koraikalangu (Cyperus rotundus), Neem (Azadirachta indica), Chireta (Opheliae chiratta) which are reputed to possess antipyretic and antiperiodic properties in Hindu Materia Medica. Usually some carminatives and laxatives are added as correctives.

VIII. Kutajapanithum—vide prescription No 21 and notes on Veppalaarisi *marked* III—was found to be useful in cases of acute and chronic bowel complaints with diarrhoea or dysentery. Its action is similar to that of Dhadumastaka churnam (prescription No. 18).

IX Bhaskara Lavanam—vide prescription No. 24. It was tried in two cases of chronic gastritis. In one case there was a certain amount of relief to the stomach, but in the other case no relief was obtained.

X Leghu Sanka Dravkam—vide prescription No. 25. This preparation which smells strongly of nitrous fumes appears to be a compound of the mineral acids. I have given it a fair trial in cases of cirrhosis of the liver with ascites—This compound distillate was recommended to me for the relief of all liver complaints by some of the Ayurvedic physicians in the town. In one of my cases, which is under treatment from 14th August 1918, it is doing some good, as the patient had to be tapped only once five weeks ago, and very little fluid has accumulated since then. This patient also gets a mild hydrogogue cathartic of Ipomœa Turpethum. In another case of cirrhosis of the liver with ascites which has been of more than five years standing, this medicine did not do the slightest benefit and the fluid had to be removed by repeated tappings.

XI. Zoofa—vide prescription No. 27.

This unani preparation has proved very efficacious in relieving the cough of bronchitis especially that of post influenzal bronchitis.

XII. Ithraphal—vide prescription No. 28. This is a unani preparation and it is a mild laxative. It was tried in a few cases of chronic constipation and found to give relief. Three drachms of the confection is an ordinary adult dose to be given at bed time.

XIII. Jawarish-a-Kamoon—vide prescription No. 30.

This was given to a case of chronic gastritis (dyspepsia). It did not give any relief.

XIV. Loha Bhasma or Iron Bhasma was obtained from Zandu Pharmacy, Bombay. It was tried in a case of anaemia with general debility. The strength and the blood of the patient improved under its use and it had no constipating effect.

XV. Siddha Bhasmam—vide prescription No. 32—Pandit Kanniyappa Mudaliyar extols its use as a specific for consumption. I tried it in a case of pulmonary tuberculosis in the second stage and in another case where the disease was fairly advanced. The first case put on weight and strength while taking it and is doing well at the time of the report. In the second case there was no appreciable effect, for in addition to the advanced pulmonary tuberculosis, the patient also had a complication of tuberculosis of the intestines.

XVI Purnachandrodhayam and specific oil for Syphilis—vide prescription Nos. 33 and 34. Both these medicines were administered as instructed by the physician who gave them. The oil is what is known as Sarva Megha Sanjeevi Oil which is considered to be a specific in syphilis After a preliminary use of the oil, Purnachandrodhayam, which is considered as the King of Specifics in all stages of Syphilis was administered for 40 days. The case selected was a typical one of secondary syphilis. There were several patches of ulcers on the body with dry crusts on some of them. Most of these healed under treatment but as two of them remained persistently unhealed and as the patient appeared to be discontented, an intravenous injection of ampsalves 0·9 gram was given. The remaining ulcers healed within four days. There is no doubt that Purnachandrodhayam on account of the mercury, arsenic and gold it contains has some effect on syphilis but the action is very slow and does not compare favourably with that of Salvarsan or of mercury administered in accordance with B.P.

XVII. Specific for Diabetes Mellitus—vide prescription No. 35

Reference has already been made to this in the notes, on Silajit No. 15. Talc Basmam (Abhrak) is very much extolled as a remedy in Diabetes Mellitus. It will be given a further trial in that disease.

XVIII. Vathagni Kumaran – prescription No. 6.

I tried this preparation for several weeks in a case of hectic fever of tuberculosis but the patient was not in any way benefited.

XIX. Iron Kalpam—vide prescription No. 36.

This is an organic compound of iron. It was tried in anaemia and dyspepsia with anorexia and was found very beneficial in improving the blood, strengthening the patient and also in creating an appetite. This preparation was supplied by Vaidya Rathna Pandit Kannappa Mudaliyar.

XX. Narayana Thailam.

The chief ingredients are:

Sathavari (Asparagus racemosa).
Aswagandha (Withania somnifera).
Vilvamula (Root of Aegle marmelos).
Patala (Sterospermum suaveolens).
Gokshuram (Tribulus terrestris).
Syonika (Colasanthas indica).
Agnimantha (Premna spinosa).

It is recommended for local massage in hemiplegia, lumbago, headache and paraplegia. This was tried externally in lumbago and was found to give relief.

XXI. Agnithundi Pill—

Prepared in accordance with Saranghadhara. Its chief ingredients are sulphide of mercury thrikatu (ginger, long pepper and pepper), chithraka (Plumbago zeylanica), the two Ksharas (Carbonate of Potassium and Sodium), Nux vomicae, Aconite, etc. It is recommended as useful in dyspepsia, indigestion, colic and as a tonic in all conditions of debility. It was given to dyspeptic patients who were very weak. The improvement was very gradual.

XXII. Specific powder from a hakim in George town, for tubercle, asthma and diabetes. As the hakim refused to give the composition or the mode of its preparation, I had to get it analysed—vide-Chemical Examiner's report. I did not find it doing any appreciable good hitherto in tubercle. In one case it reduced the temperature for three days but the fever rose up again and further administration did not do any good. In a case of pulmonary tuberculosis with hectic fever, the patient did not show any sign of improvement, though the medicine was administered in accordance with the hakim's instructions. In a third case of pulmonary and intestinal tuberculosis, the patient derived no benefit but succumbed to the disease.

XXIII. Dec' Glycyrrhiza Co.—vide prescription No. 11 and No. 23, page 12, summary of notes on drugs.

Just as in the British Pharmacopœia, all parts of vegetables, viz., roots, flowers, leaves, fruits, extracts (as catechu and opium), bark, wood and gum are used in Hindu medicine. Charaka divides the medicines into three classes according to the action they are supposed to have on the different organs of the system or particular symptoms of the disease. For example, Jeevanya—medicines which prolong life, Deepaniya which increase the appetite and increase digestive power, Jwarahara-Febrifuge.

The different forms in which medicines are administered are—

(1) Churna or powders.
(2) Swarasa or expressed juice.
(3) Quaths or decoctions.
(4) Phanta or hot infusions.
(5) Sithakashaya or cold infusions.
(6) Panya or weak decoctions.
(7) Mantha, emulsion of medicine in water.
(8) Ksheerapaka or decoction in milk.
(9) Avaleha or extract.
(10) Vati or pills.
(11) Modaka or boluses prepared by the addition of syrup.
(12) Khandapaka or confections.
(13) Phudapaka or roasting.
(14) Sandhanavarga or products of acetous fermentation.
(15) Dravaka or distilled mineral acides (e.g., Swalpadravaka and Saukadravaka).
(16) Asava and Arishta or medicated spirituous liquors.

These last are prepared with the aid of honey and treacle from various medicinal substances. If the raw drugs are only steeped in water for fermentation, the product is Asava. If, however, they are steeped in decoction of particular substances, the product is arishta.

(17) Medicated oils and ghrita.

The medicated oils are prepared by concentrating the decoction of vegetable drugs in oil, and ghritas are prepared by using clarified butter or ghee instead of oil. Ghritas are chiefly used internally and oils externally. Medicated oils and ghritas must be prepared according to the method known as ghrithapaka or thailapaka :

Different modes of applying medicines—

(a) Vasthi karma or injections into the rectum.
(b) Phalavarthi or suppositories
(c) Nasya or application of medicated substances to the nose.
(d) Kavala or Gargles.
(e) Sirovasthi or applications to the head.
(f) Nethra karma or application to the eyes.
(g) Plasters or pralopa.
(h) Poultices or Pradeha.
(i) Svedhana or application of heat to the skin for inducing perspiration.
(j) Dhumapana or inhalations.
(k) Dupana or fumigations.
(l) Ksharakarama or caustic applications.

In inorganic materia medica, the following mineral substances are mentioned :—

Sulphur, mercury, arsenic, white arsenic, orpiment, realgar, iron, sulphate of iron, iron pyrites, gold, silver, copper, sulphate of copper, tin, zinc, lead, galena, brass, mica, talc, alum, borax, lime, several salts of sodium, principally the five salts of sodium known as Panchalavanam, carbonate of sodium, and potassium, nitrate of potash, diamond, pearl, coral, silajit and red ochre. There are several compounds of these minerals mentioned but the purification of the minerals and the modes of preparation of their compounds are very tedious processes. The appliances for purifying and preparing these compounds are crude remnants of remote conception which might have been excellent when they were first put forth by the inventors in those remote times. Refer to pages 19 to 41 Vol. II N. N. Sen's Ayurvedic Medicines, also to pages 24 and 25 of N. C. Dutt's Materia Medica. They require considerable modifications and improvements in accordance with modern science. Several of these compounds such as Makaradhwajam, Vasantha Kusumakaram, Mrigangharasa, Poornachandrodayam, Raja Mrigangharasa, Panchamrutha Parpati, Mruthathapana Rasa and several other similar compounds which are considered excellent medicines by Hindu physicians require much time labour, skill, patience and money in their preparation in accordance with Hindu Pharmacy, if they are to serve the purposes for which they are intended.

APPENDIX II.

Summary of the notes on the medicines investigated, found useful, and recommended for further trial.

Names of the drugs.	Botanical names.	Prescription number.	Notes on drugs number.	Where obtainable.	Diseases used in.	Number of cases. Hospital.	Private.	Result.	Remarks.
1. Mocharas	Bombax Malbaricum (gum of).	..	1	Bazaar medicine.	1. Chronic dysentery	2	..	Cured	....
					2. Hæmoptysis	2	1	Do.	....
					3. Hæmetemisis	.	1	Do.	....
					4. Malaria	1	..	Do.	(a) In combination with other medicines.
					5. Menorrhagia	..	1	Do.	
					6. Acute dysentery .. .	..	..	..	....
					7. Chronic diarrhœa	1	..	Cured	...
2. Vappalai arishi and pattai.	Holarrhena anti-dysenterica, seeds, bark.	..	3	Bazaar medicine, also fresh plant.	Chronic dysentery	2	..	Action very slow ..	The drug has to be combined with mocharas and similar drugs to act beneficially in diarrhœa and dysentery (acute and chronic).
3. Athividyam	Aconitum hetero phyllum.	..	5	Bazaar medicine.	Acute and chronic dysentery ..	..	..	Cured	This drug enters into several compound preparations for acute and chronic diarrhœa and dysentery.
4. Adathoda	Justicia adathoda ..	..	6	Do.	Acute and chronic bronchitis ..	5	..	Did good in combination with other expectorants.	Used in the form of decoction.
5. Trivrit	Ipoemea turpethum ..	..	9	Do.	In acute and chronic constipation, ascites with cirrhosis of liver and constipation of fevers.	In several cases ..		Found useful ..	It is a good hydrogogue cathartic and can be substituted for Jalap but the compound powder (see infra) is preferable to the simple powder of the root.
6. Karishalanguni ..	Eclipta prostrata .	..	10	Fresh plant ..	In catarhal jaundice	In several cases.	private	Gave very satisfactory results.	....
7. Puliyarai	Oxalis corniculata ..	..	14	Do. ..	In chronic enteritis	..	2	Cured	Given boiled in buttermilk.
8. Bala	Sida Cordifolia ..	..	16	Fresh root ..	Sciatica	..	2	Do.	Used in the form of Bala Thaila or Ksheerabala.
					Facial palsy	..	2	Do.	
9. Talisyadhi Churnam..	....	3 (b)	2	Zanda Pharmacy, Bombay (easily made locally)	Pulmonary tuberculosis	3	..	Relieved .. .	Was useful in relieving cough. The chief ingredients are Bamboo Manna and Pinus Webbiana.
					Bronchitis and Hectic fever of Tuberculosis.	3	..	Do.	
						1	..	No relief	
10. Trivrit Churnam ..	....	15	9	Do.	Same as No. 5 supra	Several cases ..		Very satisfactory ..	This compound preparation gave more satisfactory results than the simple drug.
11. Dadumasthaka Churnam.	....	18	6	Do.	Acute dysentery	1	..	Cured	This preparation contains drugs marked 1, 2, 3 supra and other astringent drugs.
					Chronic dysentery	1	..	Do.	
12. Laghu Sudarsana Churnam.	....	19	7	Do.	Malaria and enlarged spleen ..	4	..	Four relieved and one case discharged otherwise.	When given in combination with iron or Anandha-Bhiravi.
					Enlarged spleen and liver ..	1	..		
13. Brihat Sudarsana Churnam.	....	23	7	Do.	Influenza (Broncho-pneumonia).	2	..	All the cases were benefited.	Combined with Anandha Bhiravi.
					Malaria	3	..		
					Bronchitis after influenza ..	1	..		
					Anæmia	1	..		
					Enlarged spleen and liver ..	1	..		
					Malaria with ascites and Cirrhosis of liver.	1	..		

Summary of the notes on the medicines investigated, found useful, and recommended for further trial—*cont.*

Names of the drugs.	Botanical names.	Prescription number.	Notes on drugs number.	Where obtainable.	Diseases used in.	Number of cases. Hospital.	Number of cases. Private.	Result.	Remarks.
14. Kutaja Arishtam and	....	..	8 V.	Venkatramana dispensary, Mylapore.	Chronic dysentery	1	..	Very beneficial results.	See notes on 1 and 2 (supra).
15. Kutaja Panitham ..		21	8		Chronic malaria and enlarged spleen (diarrhœa).	1	..		
					Acute dysentery	2	..		
					Chronic gastritis (diarrhœa) ..	1	..		
					Influenza (malaena)	1	..		
16. Loha Basmam ..	....	..	14	Zandu Pharmacy.	Chronic gastritis with anæmia..	1	..	Beneficial . ..	Still under treatment.
17. Ananda Bhiravi ..		16	7	Do.	Enlarged spleen	1	..	Found useful ..	In combination with Leghu Sudarsana Churnam or Panchathikthaka Decoction.
					Ascites and enlarged spleen ..	1	..		
					Malaria	5	..		
					Post influenzal bronchitis ..	3	..		
18. Leghu Sanka Dravakam.	....	25	10	Venkatramana dispensary, Mylapore.	Cirrhosis of liver and ascites ..	4	..	Ascites subsided in one case and two were discharged otherwise.	One case remaining under treatment is improving.
19. *Specific for Diabetes Mellitus.*	....	34	17	Devi Siddha Vaidyasala, Esplanade, Madras.	Diabetes mellitus	2	..	One cured, one relieved	Further trial is necessary to ascertain if on ordinary diet this compound will do any good.
20. Iron Kalpam	....	36	19	Do.	Chronic gastritis	1	..	Did much good ..	The process of preparing this compound is tedious.
					Anæmia	1	..	Do. ..	
21. Siddha Basmam ..	....	32	15	*Do.*	Pulmonary tuberculosis ..	2	..	In *one case* there was improvement, and in the other no improvement.	The *case that improved* was on admission in the commencement of the second stage of the disease.
22. *Zoofa*	....	27	11	Made locally ..	Influenza	1	..	One case of broncho pneumonia died and the others derived benefit.	....
					Influenza (broncho-pneumonia) ..	2	..		
					Influenza (bronchitis) ..	1	..		
					Bronchitis	1	..		
23. Decoction Glycyrrhizae co.	....	11	12	Bazaar medicine (easily made locally).	Several *cases of* acute and chronic bronchitis which were admitted as such or which occurred as complications of other diseases in the hospital.	..	..	Found useful in all these diseases except pulmonary tuberculosis.	Very satisfactory remedy for relieving the cough of influenza, acute bronchitis and chronic bronchitis.
24. Confection Semicarpus *Anacardium.*	....	8	7	Must be locally made.	Acute rheumatism	1	..	Cured	Further trial is necessary.
					Chronic rheumatism	1	..	Not benefited ..	....
25. Panchathikthaka Decoction.	....	17	7	Bazaar medicine (made locally).	*In cases of* malaria .. .	..	..	Found beneficial ..	Same action as Sudarsana Churnam Nos. 12 and 13 given with Anandha Bhiravi pills.
26. Ithraphal	....	28	17	Bazaar medicine (locally made).	Chronic constipation	..	1	Cured	....

APPENDIX III

List of drugs and compound preparations collected in Madras and investigated up to date of report.

Names of drugs.	Botanical names.	Quantity.
1. *Ashwagandha*—	Amukkarankilangu (Tamil).	
Dose.—Twenty grains of the powder in milk or sugar thrice a day.	Withania Somnifera ..	
Ther. uses.—In general and nervous debility, in consumption, in rheumatism, in hectic fever.		
2. *Guggulu*—		
Gum resin from Balsam odendron Mukul, U. C. Dutt, page 132.		
Preparations.—Yoga raja Guggulu, Kanchnar Guggulu, etc.		
Ther. uses—For rheumatic and nervous complaints, scrofula, chronic ulcers, etc.		
3. *Bamboo Manna*—	Vansalochana (Sanskrit) ..	
Two compound powders are prepared from this—		
(a) *Sithopaladi Churnam*—		
(1) Bamboo Manna	Bambusa Arundinaceæ ..	8 parts.
(2) Long pepper	Piper longum	8 ,,
(3) Cardamom	Elettaria cardamum ..	2 ,,
(4) Cinnamon	Bark of cinamomum zeylanicum.	1 part.
(5) Sugar	....	16 parts.
Dose—One dram thrice a day		
Ther. uses.—In consumption with dry hacking cough, hæmoptysis.		
(b) *Thalisyadi Churnam*—		
(1) Bamboo Manna	....	8 parts.
(2) Long pepper	....	6 ,,
(3) Talispathri (Pinus Webbiana) ..	....	4 ,,
(4) Dry ginger	Zingiber officinalis	2 ,,
(5) Pepper	Piper Nigrum	1 part.
(6) Cardamom	....	½ ,,
(7) Cinnamon	....	¼ ,,
(8) Sugar	....	42 parts
Dose.—40 to 60 grains		
Ther. uses.—In consumption with abundunt expectoration.		
4. *Mocharas*—	Salmili (Sanskrit) Gum of Bombax Malabaricum.	
Dose.—20 to 40 grains		
Ther. uses.—in powder for acute dysentery, chronic dysentery and diarrhœa, hæmoptysis, hæmetemisis, also a local hæmostatic.		
5. *Silajit*—		
Dose.—6 to 12 grains twice or thrice a day.		
Ther. uses.—In diabetes mellitus, in anæmia and palpitation, in cystitis, in albuminuria. This is a costly medicine and has to be obtained from Kashmere and North India.		
According to U. C. Dutt, silajit consists of lime, magnesia, silica and iron (Proto and Peroxide).		
6. *Vathagni Kumaran*—		
Rub together 8 parts of purified mercury and purified sulphur until the whole is converted into black sulphide of mercury. Then rub in juice of betel wine for two or three days for a few hours a day. Then rub in juice of pomegranate flower, then add two parts by weight of thalakam (orpiment). Heat in a Valukayanthram in sand bath gradually for three days. What sublimes at the upper part of the vessel as a solid mass is Vathagni Kumaran.		

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

Names of drugs.	Botanical names.	Quantity.

Dose.—$\frac{1}{4}$ to 1 grain twice or thrice a day after meals.

Ther. uses.—In intermittent fever, enlarged spleen, kala-azar, in hectic fever of consumption.

7. *Holarrhena Anti-dysenterica*—(Country ipecac). — Veppalai.

The seeds (veppalarishi) powdered and rubbed is given in 30 to 60 gr. doses in chronic dysentery, acute dysentery, chronic diarrhœa The bark is given in a variety of ways for the same complaints. The expressed juice of the bark is given with honey.

8. *Sherankottai, marking nut*—

Preparations—Acrid oil and electuary.

Electuary—

Names of drugs.	Botanical names.	Quantity.
Marking nut	....	1 part.
Cashew nut kernel	Anacardium, Occidentalae. .	6 parts.
Clarified honey	....	1 part.

Rub marking nut well in a stone mortar, and add gradually the cashew nut powder and honey.

Dose —Oil $1\frac{1}{2}$ dram to $2\frac{1}{2}$ dram.

Electuary— Do.

Three or four doses daily.

Ther. uses.—In acute rheumatism; not half so useful in chronic and muscular rheumatism.

9. *Nayivela Verai*— — Aditya Baktha (Sanskrit).

The seeds of *Cloeme Viscosa.*

Doses.—30 to 60 grains for adults, twice a day for two days followed on the third day by castor oil.

Ther. uses.—Anthelmintic, substitute for santonin.

10. *Adhathoda*— — Justicia Adathoda, Vasaka. (Sanskrit.)

Preparation.—decoction.

Take of Adathoda root in cut pieces one part, water 16 parts, boil down to one-fourth quantity.

Strain—dose—1 ounce thrice a day either alone or combined with other expectorants.

Ther. uses.—In acute and chronic bronchitis, asthma.

11. The following may be given alone or combined with the above (No. 10).

Dec' Glycyrrhiza Co.—

Names of drugs.	Botanical names.
(*a*) Cubebs	(*a*) Cubeba Officinale.
(*b*) Liquorice	(*b*) Glycyrrhizae Glabra.
(*c*) Long pepper	(*c*) Chavica Roxburghi.
(*d*) Chitharathai	(*d*) Alpina chinensis.
(*e*) Kadukkai	(*e*) Myrabolans Chebulic.

Take equal parts by weight and powder. One part by weight of powder and 15 oz. water to be boiled and reduced to 4 oz. or it may be converted into electuary with honey.

Doses —Compound decoction 1 oz. three or four times a day.

Ther. uses.—In acute and chronic bronchitis.

12. *Athividayam*— — Aconitum Heterophyllum.

Ther. uses.—In chronic bowel complaints as chronic diarrhœa, chronic dysentery, and acute dysentery.

Doses.—30 grains rubbed up in buttermilk or the decoction of pomegranate flower and leaves twice or thrice a day.

Generally administered with the juice of the bark of holarrenha anti-dysenterica.

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

Names of drugs.	Botanical names.	Quantity.
13. *Karpuradi Churnam*—		
Camphora	Cinnamomum Camphora, (Pacha carpooram) Tamil.	½ tola.
Cinnamon	Cinnamomum Zeylanicum.	
Cubebs	Cubeba officinale.	
Nutmeg	Myristica fragrans.	
Mace (japathri)	Myristica Officinalis	1½ tolas each.
Cloves	Eugenia Caryophyllata ..	....
Nagakesari	Cherunagpoo (Mesua Ferrea).	3 tolas.
Pepper	Piper nigrum	4½ tolas.
Long pepper	Chavica roxburghi	5 "
Dry ginger	Zingiber officinales ..	7½ "
Powder after sundrying and add double the quantity of sugar.		
Doses.—40 to 60 grains.		
Ther. uses.—Bronchial and laryngeal catarrh—also in indigestion.		
14. *Worm powder*—		
For round and thread worms—		
Purasem verai	Seeds of butea frondosa ..	
Veppalarisi	Holarrhena anti-dysenterica seeds.	2 palams each.
Vayu vilangam	Embelia ribes	
Cloves	Eugenia caryophyllatus ..	
Cardamoms	Elettaria cardomomum ..	
Large long pepper	Piper longum	
Cinnamon	Cinnamomum zeylanicum.	
Chinnamon leaves	Cinnamomum leaves of ..	
Ginger	Zingiber officinale	
Pepper	Piper nigrum	
Borax	....	
Bamboo Manna	....	
Long pepper	Chavica Roxburghi ..	2 tolas each.
Chitramulam	Root of Plumbago zeylanicum.	
Korakilangu	Tubers of cyperus rotundus.	
Vailayal uppu	Black salt (vit salt) ..	
Induppu	Rock salt	
Aranakun	Piper aurantiacum	
Kadukkayi	Chebulic myrabolans ..	
Thanrikayi	Beleric myrabolans ..	
Nellikayi	Emblic myrabolans ..	
Powder fine		
Doses.—16 to 20 grains twice or thrice a day for three days followed by castor oil.		
Ther. uses.—Anthelmintic powder ..		
15. *Trivrit Churnam*—		
Trivrit or Sivadaver	Ipomoea Turpethum ..	42 palams.
Chebulic myrobalans	....	
Belleric myrobalans	....	
Emblic myrobalans	....	
Vayuvilangam	Embelia ribes	
Rose buds (dry)	....	
Cardomoms	....	
Cinnamon	....	
Cinnamon leaves	....	1 palam each.
Korakilangu	Tubers of Cyperus Rotundus.	
Dry ginger	....	
Pepper	....	
Long pepper	....	
Senna leaves	....	
Katurohni	Picrorrhiza kurroa	
Doses—40 grains to 1½ drams with sugar in the morning.		
Ther. action.—Purgative.		

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

Names of drugs.	Botanical names.	Quantity.
16. *Ananda Bhairavi pills*—		
Borax pure		
Purified lingam or (sulphide of mercury).		
Long pepper	....	2 palams each.
Aconitum ferox..		
Pepper powder		
Powder these and grind in lime juice and make into pills of 1½ grains each.		
Dose—One pill twice a day.		
Ther. uses—In fever due to indigestion, bronchial catarrh, bronchitis, in malarial fever.		
17. *Panchathikthaka powder and decoction*—		
Shindal kodi	Tinospora cordifolia ..	
Parpataka	Oldenlandia herbacea ..	
Chiratta..	Ophelia chiratta	
Cherutaku	Siphonanthus Indica ..	
Korakilangu	Tubers of cyperus rotundus.	
Dry ginger	Zingiber officinale	
Take all the above in equal parts and powder.		
One drachm of the powder in decoction twice a day. Rub the above pill in the decoction.		
18. *Dadimastaka churnam*—		
Pomegranate fruit rind	Punica granatum (rind of the fruit of).	
Mocharas	Bombax Malabaricum (gum of).	
Veppalarisi	Holarrhena anti-dysenterica	
Poppy heads	Papaver somniferum (capsules of).	
Poppy seeds	Papaver somniferum (seeds of).	
Mangottai paruppu	Mangofera Indica (kernel of nut).	
Vattaithiruppu (pathasa).	Stephania Hernandifolia.	
Athividayam	Aconitum heterophyllum ..	
Equal parts in powder, sieved through cloth.		
Adult dose—30 to 60 grains.		
Children—10 to 15 grains.		
Ther. uses—In acute and chronic dysentery.		
19. *Leghu Sudarsana churnam*—		
Sindalkodi	Tinospora cordifolium ..	Equal parts by weight.
Kattuthippali veru	Root of chavica roxburghi.	
Thippali	Chavica roxburghi	
Katurohini	Picrorrhiza kurroa	
Kadukkai	Chebulic myrobolans ..	
Dry ginger	Zingiber officinale	
Cloves	Eugenia caryophyllata ..	
Bark of margosa	Melia Azadirachtæ ..	
White sandalwood	....	
Add half the total quantity by weight of chiratta.		
Dose—5 to 20 grains.		
Ther. uses—Malarial fevers and fever of unknown origin.		
20. *Swatchanda Bhairavi pills*—		
Pure mercury	....	1 tola.
Pure sulphur	....	
Pure aconitum ferox	....	
Nutmeg	....	½ ,,
Pepper, long	....	10½ tolas.
Rub them, make into pills of 1½ grains each. This pill is given with Sudarsana churnam in malarial fevers.		
Dose—One pill twice or thrice a day.		

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

Names of drugs.	Botanical names.	Quantity.
21. *Kudajapanitham*—		
Veppalampattai	Bark of Holarrhena antidysenterica.	100 palams.
Swarnamakshika	Ponnimalai or iron pyrites.	1 palam.
Thrikadugu (ginger, pepper and long pepper).	....	1 palam each.
Lodhra or Pachothipattai	Symplocos Racemosa.	1 palam each.
Mocharas	Bombax Malabaricum (gum of).	
Kurrunthoti or Chittamutti	Sida cardifolia.	
Rind of pomegranate fruit	Punica granatum.	
Pulp of Bael fruit	Ægle marmelos.	
Mastaka or Koraikilangu	Cyperus rotundus.	
Manjista	Rubia cordifolia.	
Katagathikai or Dhathaki	Wood fordia floribunda.	
Veppalampattai	Bark of Holarrhena antidysenterica.	10 palams.
Jaggery	....	30 ,,
Ghee	....	20 ,,

100 palams of veppalampattai are to be boiled in 16 measures of water and reduced to 2 measures. Strain, add to the filtrate jaggery and filter again and make into the consistency of treacle. Take out, add rest well powdered and add ghee at the end, while hot, and stir it well.

Dose—1½ to 2 drachms.

Ther. uses—In acute and chronic dysentery and piles.

22. *Yogaraja guggulu*—

Chief ingredients are—

Plumbago root.
Long pepper root.
Seeds of Nigella sativa.
Cummin seeds.
Guggulu.
Cardamoms.
Rock salt.
Pinus webbiana, etc.

Used in syphilis, leprosy, rheumatism, chronic nervous diseases.

Names of drugs.	Botanical names.	Quantity.
23. *Brihat Sudarsana Churnam*—		
Sandalwood	Pterocarpus santalinus (Santalum album).	¼ palam each.
Turmeric	Curcuma longa.	
Devadaru powder	Cedrus deodora.	
Vasambu	Acorus calamus.	
Koraikilangu	Cyperus rotundus, tubers of.	
Kadukkaitolu	Chebulic myrabolans.	
Cherukanjuri	Kodithuwa (Tragia-cannabina).	
Karkatashringi	Rhus succedanea.	
Dry ginger	Zingiber officinale.	
Kandankattari	Solanum xanthocarpus.	
Parpatakam	Oldenlandia herbacea.	
Nim bark	Azadirachta Indica.	
Kattutippali veru	Root of Chavica roxburghi.	
Vetti veru	Andropogon muricatus.	
Baskaramulam	Calatropis gigantea.	
Thippali	Chavica roxburghi.	
Boolam kilangu	Shati (Sanskrit) Kachura Kilangu (Mal.) Curcuma zedoaria.	
Perukurumba veru	Sanseviera zeylanica.	
Veppalarisi	Seeds of Holarrhena antidysenterica.	
Sadavari	Tannirmuttankilangu (Tam.) Hemidesmus Indicus.	

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

Names of drugs.	Botanical names.	Quantity.
23. *Brihat Sudarsana Churnam*—cont.		
Raktachandanam	Pterocarpus santalinus.	
Pathimukam	....	
Vilamicham	Andropogon Muricatus (variety).	
Cinnamon bark	Cinnamomum zeylanicum.	
Orilla	Prischnivarni, uraria lagopoides.	
Omum	Ptycotis ajowan.	
Athividayam	Aconitum heterrophyllum.	¼ palam each.
Bael root	Ægle marmelos, root of.	
Pepper	Piper nigrum.	
Gooseberry without seeds	Emblic myrabolans.	
Shintalkodi	Tinospora cordifolia.	
Katurohini	Picrorhiza kurroa.	
Plumbago root	Plumbago zeylanicum.	
Paipadal	Trichosanthus dioica.	
Moovila	Triparni, Naregamia alata.	
Chiratta	Ophelia chiratta	5 palams.

Powder and sieve through cloth.

Dose—Adults—40 to 60 grains.

Ther. uses—In all malarial and chronic fevers, anaemia, enlarged spleen.

Names of drugs.	Botanical names.	Quantity.
24. *Bhaskara lavanam*—		
Long pepper	Pippali—piper longum or Chavica roxburghi.	
Kattuthippali veru or Kandamthippilli	Root of Chavica roxburghi.	
Coriander	Coriander sativa.	
Black cummin seeds	Karinchiragum, Nigella sativa.	
Induppu	Rock salt.	2 palams each.
Valayaluppu	Vitlavana.	
Cinnamon leaves	Leaves of Cinnamomum zeylanicum.	
Thalispathri	Pinus webbiana.	
Cherunagappu	Mesua ferrea (Nagakesari) (Sans).	
Soovrchaluppu (black salt)	....	5 palams.
Pepper	Piper nigrum.	
Omum	Ptychotis ajowan.	1 palam each.
Dry ginger	Zingiber officinale.	
Cinnamon	Cinnamomum zeylanicum	6½ palams each.
Cardamum seeds	Elettaria cardomomum	
Kalluppu	Rock salt (one variety)	8 palams.
Pomegranate fruit rind	Rind of the fruit of Punica-granatum.	4 "
Pulivanchi	Amblavedasa (Sans.) Rumax vesicarius.	1 palam.

Powder, sieve through cloth

Dose—30 grains to 1½ drachms, twice a day before food.

Ther. uses—In indigestion, chronic and painful dyspepsia, dilatation of the stomach, and chronic gastritis.

Names of drugs.	Botanical names.	Quantity.
25. *Laghu Sanka dravaka*—		
Country nitre		8 palams.
Alum	....	4 "
Amm. chloride	....	
Pure borax	....	
Pot. carbouas	Yava-Ksharam	2 palams each.
Valayaluppu	Vit salt	
Gandhaka vadiuppu	Nitre (variety)	
Poonier or sodi. carbonas		
Pure ferrus sulphate	....	
Pure copper sulphate	....	1 palam each.
Suvarchala uppu	Black salt	

Powder and distil.

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

Names of drugs.	Botanical names.	Quantity.
Dose—5 to 10 drops twice a day.		
Ther. uses—In enlarged liver and spleen, indigestion and colic, in cirrhosis of the liver, ascites. If there is fever, administer in water and give fever mixture or powder.		
26. *Panchathikthaka panakam*—		
Chiratta	Ophelia chiratta.	
Katurohini	Picrorrhiza kurroa.	
Parpatakam	Oldenlandia herbacea.	
Korakilangu	Tubers of Cyperus rotundus.	
Seendalkodi	Tinospora cordifolia.	....
Take equal parts of each of the above by weight—Boil in 16 parts of water and reduce to 4 parts (one-fourth of the whole), add sugar equal to the weight of the powders and convert into syrup.		
Dose—Half an ounce B.D.S. or T.D.S., given in conjunction with Swachuntha Bhairavi, Anatha Bhairavi or Jwaramurari pills.		
Ther. uses—Malarial fever with enlarged spleen.		
27. *Zoopha*—		
(1) Zoopha	Husk of the seeds of Hyssopus officinalis.	1 palam each.
(2) Ajmuth	Carum roxburghi	1 palam each.
(3) Sombu	Pimpinella anisum.	1 palam each.
(4) Liquorice	Glycyrrhiza glabra.	1 palam each.
(5) Thuthi verai	Abutilon Indicum	3 varahanida.
(6) Bedana	Pyrus cydonia	Do.
(7) Badam pisni (gum)	Amygdala	Do.
(8) Misiki	Seeds of Hibiscus abelmoschus.	½ palam.
(9) Saphisthan	Cordia myxa.	30 fruits.
(10) Alubukara	Prunus bukhariensis ..	Do.
(11) Raisins	Vitus vinifera	1 palam.
(12) Dried figs	Ficus	10 fruits.
Bruise 2, 3 and 4 and boil all the ingredients with two measures of water down to ¾ measure—strain through cloth and take the filtrate, add about ½ viss sugar and make into syrup.		
Dose—one tola T.D.S.		
Ther. uses—for all lung complaints except consumption.		
28. *Ithraphal*—		
Kabul kadukkayi thol	Chebulic myrabolans ..	1 palam each.
Surat nellikayi	Emblic do. ..	1 palam each.
Manjakatukkathol	Chebulic do. (variety).	1 palam each.
Pinchikatukka	Do.—unripe and small.	1 palam each.
Powder, grease it with almond oil, add honey and turn into confection.		
Dose—one tola at bed time, 2 hours after meals.		
Ther uses—In rheumatism, constipation, heaviness of head, nasal catarrh, cold in the eye, sciatica.		
29. *Nellikayi leghayam*—(Phyllanthus emblica).		
Follow step in 12 (appendix 4) first part of the directions; add 3 times the quantity of sugar—turn into confection.		
Dose—one dr. to two drs.		
Ther. uses—For anorexia, biliousness, palpitation, etc.		
The property of nellikayi which is very largely used by the Unani doctor is said to depend upon the organic acids present in it.		

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

30. *Jawarish-ai-kammoon*—(composition)—

Names of drugs	Botanical names.	Quantity.
(1) Kammoona karmani	Nigella sativa	15 tolas.
(2) White pepper	Piper nigrum	3½ tolas each.
(3) Black pepper		
(4) Cinnamon bark	Cinnamomum zeylanicum	1½ tolas.
(5) Dry sathab leaves	Leaves of Ruta Augustifolia.	4½ "
(6) Ginger morabba	Ginger conserve	12 "
(7) Myrabolans conserve	....	18 "
(8) Confection of roses	....	30 "
(9) Sugar	....	30 "

Turn into confection

Doses—1½ tolas T.D.S.

Ther. uses. In diarrheoa, indigestion, dyspepsia, sour belching, removes foul-breath and watering from the mouth.

31. *Oxalis corniculata*—vide No. 14, Appendix I.

32. *Siddha basmam*—

Names of drugs	Botanical names.	Quantity.
Pravala basmam	Coral basmam	3 Rs. weight.
Thangha basmam	Gold basmam	½ Re. "
Muthu basmam	Pearl basmam	1 Re. "
Karooba basmam	Amber basmam	2 Rs. "
Pooneru churnam	Sodium oxide	1 gundumani.
Thambra basmam	Copper basmam	1 rice weight.

Rub the above in aloes juice; then heat in a crucible made of hare's bone (hare's bone ground in lime water and made into crucible) in ten cow dung cakes fire. Grind the basmam and put in a bottle.

Dose—1 grain.

Uses—In consumption (pulmonary tubercle).

Diet—Good nourishing food.

33. *Purna chanthrodhayam*—

Names of drugs	Botanical names.	Quantity.
Lingam (purified)	....	4 Rs. weight.
Sulphur do.	....	16 Rs. "
Orpiment do.	....	1 Re. "
Gold leaf do.	....	Do.

Rub mercury and gold, add sulphur and rub and then add orpiment and grind in aloes juice one day, next day in human milk and on the third day in the juice of shoe flower (Hebiscus rosa sinensis) with pooneru one rice weight. Make puttam in paddy husk for one day.

Dose—2 grains twice a day in honey. No special diet.

Uses—In cases of syphilis and venereal diseases. This should be preceded by the specific oil given below for three days with marupathiyam.

34. *Specific oil for syphilis, venereal diseases and skin diseases*—

Names of drugs	Botanical names.	Quantity.
Notchi (Neergundhi)	Vitex negundo	20 palams each.
Bark of poovaras	Bark of Thespesia populnea.	
Chengam verpattai	....	..
Pungam verupattai	Pongamia glabra	..
Ponan kanni	Alternanthera Sessilis	..
Kalyanau muruku leaves (juice of)	Erythrina Indica	10 palams.
Karasarankanni leaves (juice of)	Eclipta prostata	"
Nuna leaves (juice of)	Morinda citrifolia	10 palams.
Chittamutty	Sida cordifolia	½ palam.
Sivanar vembu	Indigofera Aspalathoides	½ "
Karim jeerekun	Nigella sativa	½ "
Omum	Ptychotis ajowan	½ "

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

Names of drugs.	Botanical names.	Quantity.
Chithorathay	Alpina chinensis	½ palam.
Paranghy Chakkay	Smilax chinensis	5 palams.
Kadukkai	The three myrabolans	½ palam.
Thanikayee		½ "
Nellikayee		½ "
Dry ginger	Zingiber officinale	½ "
Pepper	Piper Nigra	½ "
Dry gooseberry	Phyllanthus Emblica	½ "
Cubebs	Cubeba officinale	½ "
White sandalwood powder	Santalum alba	½ "
Nannari or Sarsaparilla	Hemidesmus Indicus	½ "
Sombu	Pimpinella anisum	½ "
Jeeragham	Cumina cyminum	½ "
Coriander seeds	Coriandrum sativum	½ "
Sindal kodi or gulancha	Tinospora cordifolia	½ "
Purified croton seeds well ground	Croton tiglium	1½ palams.
Garlic	Allium sativum	7½ "

Boil in pure castor-oil (12 visses) until all water is evaporated.

Doses.—One to two teaspoons for three or five days with two days marupathyam (special diet).

Diet.—Avoid gingelly oil and mustard, substitute ghee and cuminseeds. Burnt tamarind and lime juice may be used.

35. *Specific for Diabetes mellitus*—

Iron Silajit basmam	....	1 palam.
Talc basmam	....	1 "
Avaram pattai	Bark of Cassia auriculata	5 palams each.
Padri Ver pattai	Bignonia suaveolens	
Kadalazhangam pattai	Lodoicea seychellarum	
Sindal kodi	Tinospora cordifolia	
Poppy capsules	Capsules of Papaver somniferum.	
Seruu kattu kodi	Cocculus villosus	
Pinchi kadukayee	Small chebulic myrabolans.	
Nutmeg	Myristica fragrans	½ palam.
Dates	Phœnix dactylifera	½ "
Kurasani omum	Hyoscyamus nigrum	½ "
Nagakottai churnam	Eugēnia jambolans	5 palams.

Powder the vegetable drugs, add Silajit and Talc basmams. Make a decoction with a second set of the same vegetable drugs, grind the first for fifteen days in the decoction. Make pills of six grains each; one B.D.S. in water or Nagakottai decoction (decoction of the dried nut of Eugenia jambolans).

36. *Kalpam* (Iron specific)—

(1) Iron powder	....	5 palams.
(2) Pepper	....	5 "
(3) Garlic	....	5 "
(4) Limes	...	50 "

Powder the first three and grind in lime juice (juice of 10 limes). Put in pudam of 20 cow-dung cakes. Split each of the remaining 40 limes into fours. Fill each with the article after pudam. Put in a pot and pour the juice of eclipta prostrata to the level of the article, cover, and close rims with wax. Bury under ground in wet soil for four months.

List of drugs and compound preparations collected in Madras and investigated up to date of report—*cont.*

Names of drugs.	Botanical names.	Quantity.
Repeat and instead of putting inside split limes, paste the pudamed article over cleaned dry ginger which has been perforated freely with needles. Bury under ground as before. Mix both at the end of four months and grind. Dose.—2 to 3 grains. Uses.—In Anaemia, Jaundice and Dyspepsia.		

37. *Ipoemea Turpethum*—vide No. 9—Appendix I.
38. *Eclipta Prostrata*—vide No. 10—Appendix I.
39. *Butea Frondosa*—vide No. 11—Appendix I.
40. *Vanda Roxburghi*—vide No. 12—Appendix I.
41. *Sida Cordifolia*—vide No. 16—Appendix I.
42. *Phyllanthus Emblica*—vide No. 17—Appendix I.
43. *Agnithundi pills*—vide No. XXI—Appendix I.
44. *Specific powder for Tubercle, etc.*—vide No. XXII—Appendix I.
45. *Loha Bhasmam*—vide No. XIV—Appendix I.
46. *Narayana Thailam*—vide No. XX—Appendix I.
47. *Talisyadhi and sithopaladhi churnams*—vide 3 (*a*) and (*b*) supra.

APPENDIX IV.

List of drugs and compound preparations collected in Madras up to the date of report and to be investigated hereafter.

Names of drugs.	Botanical names.	Quantity.
1. *Gudumal*— One tola of the whole plant is to be boiled in 4 oz of water and reduced to 1 oz. Dose.—One ounce thrice a day. Ther use.— In Diabetes mellitus. Pandit Gopalachari Garu says that this plant is obtainable from the Himalayas and Gwaliar and is much used in the north of India for diabetes.		
2. *Vellarai*— Prepare decoction as No. 1 .. .. Dose—One ounce thrice a day. Ther. use.—In syphilis, leprosy, mental weakness, and insanity.	Hydrocotyle Asiatica.	..
3. *Laksha* (Lac).— Dose.—5 to 10 grains thrice a day. Ther use.—Stops bleeding in hæmoptysis, piles and menorrhagia.		
4. *Bonduc seeds or Kachakayi*— Preparation.—Equal parts of Bonduc seeds and piper Nigrum well powdered. Dose. 15 to 30 grains thrice daily. Ther. use.—In intermittent fevers.	Seeds of Caesalpinia Bonducella ; Kuberakshi (Sanskrit).	..
5. *Trivrit legyam*— Confection of Ipomœa Turpethum. Sivadaver—$2\frac{1}{2}$ visses—cut into small pieces and bruise—boil in $24\frac{1}{2}$ measures of water down to $\frac{1}{8}$ of the quantity—strain, add sugar-candy to the fitrate. The weight of the sugar-candy must be three times the weight of the powder given below :—		
Cardamoms. Cinnamon leaves, and Cinnamon bark		1 palam each
Sivadaver		1 viss.
Powder well and strain through muslin or fine cloth. After the sugar candy has melted in the filtered decoction and the latter has the consistency of treacle, add the powder and turn into confection. Dose.—Two drachms in the morning. Ther. use—Purgative.		
6. *Viswambara Rasa.*— All the ingredients same as Anandha Bairavi—sulphur to be added. Given with Panchathikthaka decoction in ordinary fever, catarrh and indigestion.		
7. *Kasturi Bhairavi* — Purified lingam. Purified aconite ferox. Purified borax. Nutmeg. Pepper. Tippali. Musk. Take equal parts of each by weight, grind in water and make into pills of one grain each. Ther. use.—In all phlegm fevers, acute bronchitis, pneumonia. Dose.—One pill thrice a day, rubbed in the decoction of *Chittharathai* (Alpina chinensis).		

List of drugs and compound preparations collected in Madras up to the date of report and to be investigated hereafter—*cont.*

Names of drugs.	Botanical names.	Quantity.
8. *Kapa Kethu vati.*—		
Sanka basmam	Conch basmam.	Equal parts by weight.
Long pepper	Chavica Roxburghi.	
Borax, dessicated	....	
Aconitum ferox purified	....	

Grind in decoction of Curcuma zedoaria, Kachora kilangu and turn into pill mass. Divide into $\frac{1}{2}$-grain pills.

Dose. One pill of $\frac{1}{2}$ grain to be given in decoction of *chitharathai* thrice a day.

Ther. use—Bronchitis, catarrh and specially in bronchitis of children.

9. *Chithra kathi pills or powder.*—

Composition—

Names of drugs.	Botanical names.
1. Chithramulam	Root of Plumbago-zeylanica.
2. Thipelli ver	Root of Chavica Roxburghi.
3. Sarjikaksharam	Crude Sod. Carbonate or Barilla.
Panchalavanam or five salts—	
4. Common salt	....
5. Induppu (Saindhva lavanam) ..	....
6. Vilayaluppu (vit salt)	....
7. Karpuppu (kacha lavanam)	....
8. Suverchalappu (black salt)	....
9. Dry ginger	Zingiber officinale
10. Long pepper	Chavica Roxburghi.
11. Black pepper	Piper Nigrum.
12. Assafœtida	....
13. Omum	Ptychotis Ajowan.
14. Chaviyam (chavica) (Kattu Mulakuver).	Piper chaba.

Take each of the above in equal parts—powder fine.

Use as powder—or grind with lime-juice and turn into pills of 5 grains each.

Doses.—15 grains of the powder or three pills T.D.S.

Ther. uses.—In chronic and muscular rheumatism and in all painful affections of the joints and bones.

10. *For Catarrhal Jaundice*—

Names of drugs.	Botanical names.	Quantity.
Leaves of castor oil plant	Ricinis communis.	Equal parts.
Leaves of Keelarnelli	Phyllanthus Niruri.	

Grind together and rub into a bolus of the size of a small lime. Administer three mornings in milk and on the fourth morning give a purgative like Trivrit Churnam.

11. *Mundi.*— Kamazariyus (Arabic). Kottaikarandai (Tam.). Sphæranthus Hirtus.

Leaves of the plant should be dried in the shade.

Dose. 20 grains, twice a day.

Ther. uses. Nervine tonic, anti—syphilitic, and in chronic skin diseases.

12. *Nowshdhara*—

Names of drugs.	Botanical names.	Quantity.
Rose flower	Flowers of Rosa Damascena.	$1\frac{1}{4}$ varahanida.
Koraki langu	Tubers of Cyperus Rotundus.	$1\frac{1}{4}$,,
Mastaki	Resin and Galls of Pistacea Terebinthinæ.	$\frac{3}{4}$,,
Nilakatambu	Ipœmea Hederaceœ ..	$\frac{3}{4}$,,
Cloves	Eugenia Carophylli ..	$\frac{3}{4}$,,
Jada Manji	Nardostachy Jata-mansi ..	$\frac{3}{4}$,,
Cardamom seeds	Elettaria Cardomomum ..	1 ,,
Talispathri	Pinus Webiana	$\frac{1}{2}$,,
Cinnamon leaves	Cinnamomum zeylanicum ..	$\frac{1}{2}$,,
Kichili kilangu	Curcuma zedoaria	$\frac{1}{3}$,,
Cinnamon bark	....	$\frac{1}{3}$,,
Large cinnamon bark	....	$\frac{1}{2}$,,

List of drugs and compound preparations collected in Madras up to the date of report and to be investigated hereafter—*cont.*

Names of drugs.	Botanical names.	Quantity.
Nutmeg	Myristica fragrans	½ varahanida.
Mace	Do. officinalis ..	⅛ ,,
Agar	Aquilaria Agallocha ..	½ ,,
Saffron	Sassaferas Indica	½ ,,
Surat gooseberries	Phyllanthus Emblica or Emblic myroblaans.	3½ palams
Honey	....	10 ,,
Sugarcandy (China)	....	10 ,,

Soak Surat Nellikkayi (gooseberries) in water for 12 hours, strain and throw away the water. Add fresh water and boil for a couple of hours. They become soft. Make into a paste by grinding. Powder the other ingredients except saffron and mustaki. Make treacle of honey and sugarcandy. Add the first paste and after 10 minutes add the powder to the latter. After boiling for 20 to 30 minutes, add mustaki and saffron. Turn the whole into confection.

Dose.—Infants ⅛ tamarind seed weight; adults 1 tola.

Ther.—use. In diarrhœa, dyspepsia, indigestion, in intestinal colic, also in palpitation of the heart.

13. *Unani Cholera pills.*—

(1) Calotropis gigantea flower (white variety).	....	2 tolas.
(2) White pepper	....	2 ,,
(3) Common salt	....	1 tola.
(4) Lime-juice	....	3 tolas.

Powder the first three ingredients, mix with lime juice and convert into two-grain pills.

Dose.—One to two pills with equal parts of rose-water and omum-water every two or three hours.

In young children half the dose; don't give more than four doses.

14. *Cough powder.*—

(1) Black pepper	Piper Nigrum	1 tola.
(2) Ajowan	Ptychotis Ajowan	1 ,,
(3) Thippali	Chavica Roxburghi ..	1 ,,
(4) Rock salt	Rock salt	1 ,,
(5) Namakai siah, or black salt or (karupuppu, Tamil).	Do. (variety)	1 ,,
(6) Borax	Borax	,,
(7) Adathoda leaves	Leaves of Justicia Adathoda.	40 tolas.

Put all the abovementioned ingredients in a small pot, close the mouth carefully and put the pot in the burning fire for some time so that the ingredients in it may be completely burnt. Use the burnt powder, 2 to 6 grains mixed with honey.

Uses.—In catarrh and bronchitis.

15. *Pills for Dysentery.*—

(1) Gall nuts	Beleric myrobalans ..	¾ tola.
(2) Chotimayi	Tamarix Articulata ..	¾ ,,
(3) Opium	Opium	3/9 ,,
(4) Acaciæ gum	....	½ ,,

Dissolve opium in a little water. Powder the rest of the ingredients and mix with the solution and make into pills of three grains each.

Dose.—One or two pills three or four times a day.

List of drugs and compound preparations collected in Madras up to the date of report and to be investigated hereafter—*cont.*

Names of drugs.	Botanical names.	Quantity.
16. *Tankana Pills.*—		
(1) Borax, purified	Borax	½ tola each.
(2) Nitre	Pot Nitrate	
(3) Assafœtida	Assafœtida	
(4) Kantham	Magnetic oxide of iron	
(5) Purified iron pyrites	Swarna Makshika	
(6) Opium	Opium	
(7) Garlic	Allium sativa	
(8) Kernel of Boduc seeds	Kernel of Bonducella Semina.	

Powder, grind in ginger juice and turn into 2 or 2½ grains pills. Given in painful dyspepsia; laxative of Thriphala should be given.

Names of drugs.	Botanical names.	Quantity.
17. *Krimiharavati or Anthelmintic Pills.*—		
Mercury	....	1 tola.
Sulphur	....	1 "
Kuras-ani-omum	Hyoscyamus Nigrum	3 tolas
Vayuvelangam	Embelia Ribes	4 "
Butea frondosa	....	6 "
Musthi (seeds of Nuxvomica)	....	6 "

Grind in water and turn into two-grain pills.

Dose.—One pill four times a day for children and two or three pills four times a day for adults; next day castor-oil.

Ther. uses.—Anthelmintic for all intestinal worms.

Names of drugs.	Botanical names.	Quantity.
18. *Swasakudaram.*—		
Composition—		
Pure mercury	....	One of each.
Pure sulphur		
Pure aconitum ferox		
Borax		
Orpiment		
Pepper	....	8 parts.

Dose—1½ to 2 grains.

Ther. use.—Asthma, bronchitis.

Names of drugs.	Botanical names.	Quantity.
19. *Mruthouthapanarasa.*—		
Composition—		
Gold	....	1 part.
Silver	....	1 "
Rasasindhuram	....	1 "
Copper bhasmam	....	1 "
Mica	....	2 parts.
Panchalavanam	....	1 part each.
Garalam	Cobra poison	3 tolas.
Aconite	....	2 "

Reduce to powder, macerate the powder in the expressed juices of the following:—

Names of drugs.	Botanical names.	Quantity.
(1) Moringa	Moringa Pterygosperma	..
(2) Datura fastuosa.		
(3) Justicia Adathoda.		
(4) Apamarga	Achyranthæs aspera	..
(5) Crocodile bile.		
(6) Peacock bile.		
(7) Wild boar bile.		

Dose.—½ to 1 mustard weight.

Ther. uses.—Apoplexy, convulsive fits.

Names of drugs.	Botanical names.	Quantity.
20. *Rasothamathi powder.*—		
(1) Mercury.		Equal parts.
(2) Sulphur.		
(3) Manosila	Realgar	
(4) Cumin seeds.		
(5) Karungeeragam	Nigella sativa	
(6) Manjal (Haridra)	Curcuma Longa	
(7) Maramanjal	Coscinum Fenestratum	
(8) Pepper	Piper Nigrum	
(9) Sindhuram	Red oxide of lead (Minium).	

List of drugs and compound preparations collected in Madras up to the date of report and to be investigated hereafter—*cont.*

Names of drugs.	Botanical names.	Quantity.

Grind Nos. 1, 2, 3 and 9. Powder the rest separately—mix and grind altogether.

Ther. use.—For external application for ringworm—mixed with coconut-oil or lime-juice.

21. *Rohithaka Arishtam*—

Andersonia Rohithaka (Shemmaram; Tam.).

Composition:—

Bark of Rohitha.

To be put into 24 measures of water and boiled down to 6 measures—strain add jaggery 5 visses.

Names of drugs.	Botanical names.	Quantity.
(1) Dhataki	Woodfordia Floribunda	4 palams each.
(2) Long pepper	Chavica Roxburghi	
(3) Kandan Tippali	do. root of ..	
(4) Cheviam	Piper chaba ..	
(5) Chithramulam	Plumbago zeylanicum	
(6) Ginger	Zingiber officinale ..	
(7) Cardamoms	Elettaria cardamomum	
(8) Cinnamon	Cinnamomum zeylanicum	
(9) Do. bark	do. bark of	
(10) Triphala	The three myrabolans.	

Powder these and mix them with the syrup already made and keep sealed for one month air-tight. ....

Ther. uses.—In enlargemennt of the liver and spleen.

Dose.—Quarter to one ounce.

22. *Lohasava.*—

Take fine iron powder, purify by soaking in lime juice and then burn the whole.

Names of drugs.	Botanical names.	Quantity.
Thrikadugu	The three acrids.	8 palams each.
Thripala	The three myrabolans.	
Omum	Ptychotis Ajowan.	
Vayuvilangam	Embelia Ribes.	
Koraikilangu	Tubers of Cyperus Rotundus.	
Chithramulam	Plumbago zeylanicum.	

To be well powdered. Put in $25\frac{1}{2}$ measures of water with jaggery 5 visses and honey 3 visses; mix and keep sealed for one month.

Ther. uses—For all anæmias.

Dose.—Two drachms to one ounce.

23. *Balasanjeevi pills*—

Names of drugs.	Botanical names.	Quantity.
Poornachandrodayam	....	1 Re. weight.
Kunkumappoo	Sassafras Indica	1 dr.
Gorojanam	Fel Bovinum (dessicate)	$1\frac{1}{2}$ drs.
Musk	Moschus Moschiferus	15 grs.
Camphor	Pachakarpuram (unbaked)	$1\frac{1}{2}$ drs.
Koshtam	Aplotaxis auriculata	
Akrakaram (pellitory root)	Anacyclus Pyrethrum	1 palam each.
Dry ginger	Zingiber officinale	
Pepper	Piper Nigrum ..	
Long pepper	Chavica Roxburghi	
Kadukkai	Chebulic myrabolans	
Thanikkai	Beleric do.	
Nellikkai	Emblic do.	
Chithirathai	Plumbago zeylanicum	
Cheviyam	Piper chaba	
Cherutheku	Cleorodendron serratum	
Katurohini	Picrorrhiza Kurroa	

Powder vegetable drugs and grind first 5 and mix with the powder—grind in—Adathodai (*a*) Adhathodi vasica juice first day; grind in *Vishnukranthi* (*b*) Evolvulus alsinoides juice on the second day; third day in Utharani (*c*).

List of drugs and compound preparations collected in Madras up to the date of report and to be investigated hereafter—*cont.*

Names of drugs	Botanical names.	Quantity.
Achrynathes aspera juice—fourth day in human milk, fifth day in ginger juice, sixth day in Tholasi (*d*) Ocimum sanctum juice, and then turn into one and half grains pills.		
Dose.—One to three pills for children *under three*—		
24. *Gorojan pills.*—		
Pravala Bhasmam	....	1 Re. weight.
Hart's horn Bhasmam	....	$\frac{1}{2}$ Re. "
Turtle shell Bhasmam	....	2 Rs. "
Kunkumappoo	Sassafras Indica	1 Re. "
Kasturi	Moschus moschiferus ..	$\frac{1}{4}$ varahanidai.
Dry ginger	*Zingiber officinale*	2 "
Triphal each	The three myrabolans ..	2 "
Trikatugu each	The three acrids	2 "
Cloves	Eugenia caryophyllata ..	2 "
Cardomum	Elettaria cardomomum ..	2 "
Koshtam	Aplotaxis auriculata ..	2 "
Akrakaram	Anacyclus Pyrethrum ..	2 "
Talispathri	Pinus Webbiana	2 "
Omum	*Ptychotis ajowan*	2 "
Grind in juice of leafs of betel—chavica first day, 2nd day in Thulasi, Oscimum sauctum juice, 3rd day in *Carpoo-avallee juice*, Anisochilus Carnosus.		
25. *Parangyathi churnam*—		
(1) Madhusnuhi	Smilax Chinensis.	$\frac{1}{2}$ *palam each.*
(2) Indian sarasparilla	Hemidesmus Indicus.	
(3) Aswaganthi	Withania somnifera.	
(4) Jeerakam	Cummin seeds.	
(5) Vidari	Convolvulus-paniculata.	
(6) Sugarcandy	....	2 palams.
Powder the vegetable drugs and mix with sugarcandy.		
Dose.—Thirty *to sixty grains.*		
Ther. uses.—Constitutional syphilis.		
26. *Swethana lepam.*—		
Devatharam	Cedrus deodara	
Ginger	....	
Amom. Chloride	....	
All in equal parts to be mixed with cow's urine or limejuice or brandy.		
Ther. uses.—To be externally applied in inflammations.		
27. *Punarnavathi churnam*—		
White punarnava root	Boerhaavia Diffusa.	
Thevatharam	Cedrus Deodara.	
Chinthalkodi	Tinospora cordifolia.	
Sirubothi	Cissampelos Pereira.	
Ginger	Zingiberis officinales.	
Ananeringal	Gokshuram—Tribulus. Terrestris.	
Turmeric..	Curcuma longa.	
Maramanjal	Coscinium Fenestrata.	
Chiretta	Ophelia Chiratta.	
Ramamallika	Jasminum (small variety).	
Athivasa	Aconitum Heterophyllum.	
Equal parts in powder.		
Dose.—Ten grains three times a day.		
Ther. uses.—In fever with dropsy.		
28. *Bathing oil for the head in Glandular Swellings of the neck*—		
Karunuchi	Vitex nigundoo.	....
Four palams of the above in one measure of water to be pounded and pressed out three times.		

List of drugs and compound preparations collected in Madras up to the date of report and to be investigated hereafter—*cont.*

To this water, add the following medicines for kalkam :—

Names of drugs.	Botanical names.	Quantity.
Vasambu	Acorus calamus.	$1\frac{1}{4}$ Kazanchu each.
Myrobolans without kernal	....	
Kolarakku	Lac sticks	
Sandalwood	Pterocarpus santalinus.	
Kadugurohini	Picrorrhiza kurroa.	

The Kalkam medicines are to be ground well and with one nazhi (quarter measure) of coconut oil must be added to the above decoction and then boiled ; on the day it is to be strained, the milky juice of two copras or dried cocoanuts is to be added. Boil again until the whole is of arakkupakam.

Apply this over the head.

A lady for a month's use may require three nazhis.

Ther. uses.—For glandular swellings of the neck.

29. *Gochurathi churnam*—

Gokshuram	Tribulus terrestris	9 tolas.
Cubebs	Cubeba officinale	3 ,,
Nagakesari	Mesua ferrea	3 ,,
Ravel chinni	Rhei radix	3 ,,
Surakaram	Pot nitrate	3 ,,
Powder and mix		

Dose.—Ten to 20 grains for all urinary diseases.

30. *Kushtadi churnam*—

Cherubodhi	Stephania hernandifolia.	All in equal parts.
Malkangni	Celastrus paniculata.	
Lodhuka chekkai or pattai	Symplocos racemosa	
Maramanjal	Coscinium fenestratum.	
Koshtum	Aplotaxis auriculata.	

Uses.—For tooth-ache, and gingivitis, add thrikadugu or alum to suit the case.

31. *Agni muka churnam*—

Assafœtida	....	1 tola.
Vasambu	Acorus calamus	4 tolas.
Tippali	Chavica roxburghi	6 ,,
Ginger	Zingiber officinale	8 ,,
Omum	Ptychotis ajowan	10 ,,
Chebulic myrobolans	....	12 ,,
Chithramulam	Plumbago root	14 ,,
Koshtum	Aplotaxis auriculata ..	16 ,,

Powder and mix.

Ther. uses.—For indigestion, dyspepsia.

Dose.—10 to 16 grains.

32. *Abhaya modakam*—

Kadukkai	Chebulic myrabolans.	All in equal parts. One part of each.
Pepper	Piper nigrum.	
Ginger	Zingiber officinale.	
Vayuvilangam	Embelia ribes.	
Nellikkai	Emblic myrobolans ..	
Tippali	Chavica roxburghi.	
Modi	Do. root of.	
Lavangapathiri	Cinnamon leaves.	
Koraikilangu	Tubers of cyperus rotundus.	
Croton seeds, purified	Seeds of croton tiglium ..	2 parts.
Trivarth	Ipomœa turpethum ..	8 ,,
Sugar		6 ,,

Mix.

List of drugs and compound preparations collected in Madras up to the date of report and to be investigated hereafter—*cont.*

Names of drugs.	Botanical names.	Quantity.
Ther. uses.—Purgative to adults; not meant for children.		
Dose.—6 to 8 grains.		
32. *Purification of croton seeds*—		
First boil well in buffalo's dung; after drying remove the central sprout and then boil in milk.		
33. *Itchabhathi*—		
Mercury, purified	....	½ tola.
Sulphur	....	1 „
Pepper	....	1½ tolas.
Borax	....	2 „
Ginger	....	2½ „
Kadukkai	....	3 „
Purified croton seeds	....	3½ „
Rub together mercury and sulphur first and then the rest with the mass. Turn into pills of green dhall size.		
Dose.—One to four pills.		
Ther. uses.—Purgative.		
34. *Vathagajangusam (from Vydia chintamani)*—		
Mercury	....	8 tolas.
Sulphur	....	3 „
Nux vomica	Strychnos nucis vomicæ ..	3 „
Thri kadugu	The three acrids (each) ..	1 tola.
Thriphala	The three myrabolans (each)	1 „
Grind in decoction of rasna and turn into pills of two grains each.		
Ther. uses.—In rheumatic pains and nervous disorders.		
35. *Karpura rasa*—		
Pure hingulam (sulphide of mercury) ..		All in equal parts.
Opium		
Koraikilangu	Tubers of cyperus rotundus.	
Veppalarisi	Seeds of Holarrhena antidysenterica.	
Nutmeg	Myristica fragrans.	
Camphor		
Purify hingulam by rubbing in lime juice, then dry, rub the whole in omum water and then turn into two grains pills.		
Ther. uses.—Diarrhœa, indigestion.		
36. *Thrinethrarasam*—		
Purified aconite	Aconitum ferox.	In equal parts
Kadugurohini	Picrorrhiza kurroa.	
Pepper	Piper nigrum.	
Rub in Karsananganni juice	Eclipta prostrata.	
Make into two grains pills.		
Ther. use.—In fevers.		
Purify aconite by boiling in cow dung..		
The following are some of the Arishtas and Asavas used in Ayurvedic dispensaries:—		
(1) Balarishta	for nervous disorders.	
(2) Rohitarishta	for enlarged spleen.	
(3) Drakshanishta	as a tonic in general debility.	
(4) Chandanasava	for gonorrhœa, gleet, etc.	
(5) Kanakasava (Dhatura)	for bronchitis and asthma,	
(6) Asokarishta (saraca Indica) ..	for menstrual disorders.	
(7) Arjunarishta	for heart diseases.	
(8) Lohasavam	as a general tonic.	
(9) Kudajarishta	for diarrhœa, dysentery, etc.	

Dhataki flowers (flowers of woodfordia floribunda) are to be added to the prepared liquids in making most of the Arishtas and Asavas for causing alcoholic fermentation, before the pots in which the materials are placed, are sealed and put away.

Arishtas are prepared by the materials being immersed in decoctions and *Asavas* only in water.

The following legyams are also used in Ayurvedic dispensaries.

(1) Vilvadhi .. .. for dyspepsia.
(2) Kushmandam .. .. .. for debility.
(3) Chyavanprash .. .. .. for consumption, asthma. and general debility.*

APPENDIX V.

Statement showing the names of diseases treated with results at the Government General Hospital, Madras, from 12th July to 31st October 1918 by Ayurvedic and Unani medicines.

Number.	Names of diseases.	Total.	Results.				
		Number of admissions.	Cured.	Relieved.	Discharged otherwise.	Died.	Remaining.
		NO	NO.	NO.	NO.	NO.	NO.
1	Acute Rheumatism	1	1	..	..	..	..
2	Chronic do.	1	..	..	1	..	..
3	Acute dysentery	4	3	..	..	..	1
4	Chronic do.	2	1	..	1	..	..
5	Anæmia	1	..	..	..	..	1
6	Ascaris Lumbricoides	2	..	..	2	..	..
7	Asthma with acute bronchitis	1	..	1	..	..	..
8	Asthma and bronchopneumonia of influenza ..	1	..	..	..	1	..
9	Asthma bronchial	1	..	1	..	..	..
10	Bronchial catarrh	1	1	..	..	..	..
11	Bronchitis post-Influenzal	2	2	..	..	..	..
12	Acute bronchitis	1	1	..	..	..	..
13	Chronic bronchitis	3	1	2	..	..	..
14	Chronic gastritis	3	1	1	..	..	1
15	Chronic diarrhœa	1	..	1	..	..	..
16	Chronic constipation	1	1	..	..	..	..
17	Constipation	1	1	..	..	..	..
18	Diabetes mellitus	2	1	1	..	..	..
19	Cirrhosis of liver with ascites	4	..	1	2	..	1
20	Hemiplegia	1	..	..	..	..	1
21	Influenza	3	2	1	..	..	..
22	Malaria	4	1	2	..	..	1
23	Malaria with asthma	1	..	..	..	..	1
24	Malaria with enlarged spleen	4	..	1	3	..	..
25	Malaria with enlarged liver and spleen .. .	1	..	1	..	..	..
26	Pulmonary tuberculosis	5	..	4	..	1	..
27	Secondary syphilis	1	..	1	..	..	..
	Tota ..	53	17	18	9	2	7

APPENDIX VI.

Substances analysed by the Chemical Examiner, Madras.

1. A sample of Poornachandrothayam which is supposed to contain gold was obtained from Venkataramana Dispensary, Mylapore. Some of the Indian physicians doubt whether gold which is not volatile could be present in the compound. Chemical Examiner's report showed that the sample contained gold.

2. Specific Powder—vide Notes No. 22. This was found to consist mostly of ferric oxide, traces of gold, lime sulphates.

3. Poonier Chunnam—vide prescription No. 32 contained lime, sodium oxide, potassium oxide, alumina, carbonic acid and chlorine.

4. Coral Basmam—vide prescription No. 32 contained calcium carbonate and sulphide.

5. Talc Basmam—vide prescription No. 35 contained alumina, magnessia and silica.

6. Iron Kalpam—vide prescription No. 36 contained ferric oxide and some vegetable powder.

7. Vasantha Kusumakaram contained mercury, gold, iron, lime, silica, alumina and traces of tin.

8. Karooba and pearl Basmam contained mostly resinous product resembling benzoin and traces of lime were also present in the ash.

APPENDIX VII.

Letter--from M.R.Ry. Rao Sahib M. C. KOMAN Avargal, L.M. & S., Honorary Physician, Government General Hospital, and Officer in charge of investigation into Ayurvedic and Unani Medicines, Madras.

To—the District Medical and Sanitary Officer / Civil Surgeon.

Dated— 1918.

I have the honour to request favour of information on the following points in connexion with my investigation into Ayurvedic and Unani drugs:—

(1) The names and residence of well-known Ayurvedic and Unani physicians in your district or division.

(2) How many of them can be got at easily and how many are likely to help me.

(3) Whether you can kindly arrange with some of them if not with all, to meet me at some place selected by you.

(4) Whether they have any special methods of treatment for the following diseases and whether you have come across cases in which they were found useful:—

Cerebral apoplexy, cholera, plague, hemiplegia, paraplegia, locomotor ataxia, progressive muscular atrophy, pseudohypertrophic paralysis, spastic paraplegia, neuralgias especially sciatica, syphilis, leprosy, tubercular diseases, diabetes (mellitus and insipidus), asthma, chronic bronchitis, hydrophobia, mania, septicæmia, dysentery, chronic enteritis, pneumonia, different forms of Bright's disease, cirrhosis of liver with ascites, kala-azar, malaria and its complications, acute rheumatism, diseases of the heart, lymphangitis and filarial diseases, all other important diseases for which specifics are available.

(5) Kindly let me have your own experience of the use of any drugs in these systems if you have experimented with or used them.

I further request you will kindly obtain, if possible, information regarding the chief drugs and specifics used by the Ayurvedic and Unani physicians, under the following headings:—

(1) Names of single drugs when used alone.
(2) The composition of their compound preparations.
(3) The method of preparation.
(4) The mode of administration.
(5) Therapeutic uses.
(6) Dosage.
(7) The nature of diet in each case.
(8) Any other remarks with regard to physiological action, poisonous doses, source, character, etc.

I have to arrange the programme of my visits into districts on hearing from you.

APPENDIX VIII.

Letter—from M.R.Ry. Rao Sahib M. C Koman Avargal, L.M. & S., Honorary Physician, General Hospital and Officer in charge of investigation into Unani and Ayurvedic Medicines, Madras.

To—the Collector of

I have the honour to request you will kindly ask the Divisional Officers and Tahsildars under you to send me a list of the names of Ayurvedic and Unani physicians of your district, who, they think, will be able and willing to help me in my investigation. It would facilitate my work if these physicians could be kindly induced to meet me at the district or taluk headquarters. On hearing from the officers mentioned above, I shall furnish you with a programme of my tour.

OFFICE OF THE HONORARY PHYSICIAN,
GENERAL HOSPITAL, MADRAS.

31st December 1919.

No. 114.

From

M.R.Ry. RAO BAHADUR M. C. KOMAN AVARGAL, L.M. & S.,
HONORARY PHYSICIAN AND OFFICER IN CHARGE OF
INVESTIGATION INTO INDIGENOUS DRUGS,
MADRAS.

To

THE HON'BLE THE SURGEON-GENERAL
WITH THE GOVERNMENT OF MADRAS,
MADRAS.

SIR,

In continuation of the preliminary report made on the 7th December 1918, I have the honour to submit this further report on the investigation into the properties of indigenous drugs, used by the Ayurvedic and Unani physicians. At the very outset I must say that it was with great diffidence that I entered upon this work of investigation and anxious I certainly was to procure some guide in this investigation that might aid me in the prosecution of this interesting enquiry; but my anxiety was greatly relieved when I was able to get possession of the following works :—Pharmacographia Indica by Dymock, Warden and Hooper (three volumes), the vegetable Materia Medica of Western India by Dymock, the Materia Medica of India and their therapeutics by Khory and Katrack, Ainslie's Materia Indica, the Taleef Shereef translated by Playfair, Materia Medica of the Hindus by Udoy Chand Dutt, Indigenous drugs of India by Kanny Lal Dey, Waring on Bazaar medicines, Waring's Pharmacopœia of India, Mohideen Sheriff's supplement to the Pharmacopœia of India, and Materia Medica, Report of the proceedings of the Central Indigenous Drugs Committee of India and 500 Indian plants used in medicine and the arts published by the B. M. Depository, Mangalore. The following standard works on Ayurveda were also at my disposal :—Captain Browne's memoirs containing the original Ayurveda as imparted by the hermit king of Kasi to Sushruta and his other disciples translated by A. F. R. Hoernle, C.I.E., Sushruta Samhita translated by Kaviraj Kunjan Lal, Charaka Samhita (Malayalam translation), Vaghbada's Ashtanga Hridayam (Malayalam translation), Ayurvedic system of medicine in three volumes by Kaviraj N. N. Sen Gupta, Madhava Nidanam (in Malayalam) and several other works on Ayurvedam by reputed Malayali physicians, also several treatises on medicine in Tamil. In the preface to his Materia Medica, writing about the substances brought forward in that work, Ainslie in 1826 wrote, "let it be the business of future experience to confirm or reject whatever may be ascertained in its nature sanative, benign, narcotic, or altogether inefficacious." In 1833 Playfair wrote, "conscious that the liberal minded will give me credit for the best of motive, I shall not dread criticism and if it has the effect of inducing those more competent to the task to an enquiry into the properties and nature of medicines, my views will have been fully accomplished." Since then a large volume of work has been done in the direction indicated by these two great physicians and their expectations and anticipations have been more than fulfilled. The works published by the practitioners of the western system of medicine mentioned above are the result of patient industry and research and will last as standing monuments to the credit of the great authors who brought

them out for the benefit of the profession and suffering humanity. The Pharmacographia Indica treats of almost every Indian drug with a description of its botanical and vernacular names, of its history, sources, properties, chemical composition, etc., but probably in a country where almost any plant, shrub or tree one comes across, is considered to possess medicinal properties, the votaries of Ayurveda may be unwilling to acknowledge the great value of the information contained in those three volumes and may complain that there is still much to be done. The report of the proceedings of the Indigenous Drugs Committee of India contains very valuable information on several important and useful drugs of India. Several drugs were incorporated as addenda to the British Pharmacopœia as a result of the investigation conducted by that committee. I have to thank Major-General G. G. Giffard, C.S.I., K.H.S., I.M.S., for having informed me about the existence of this report and obtained it for me from the Medical Storekeeper to the Government. The Indian Pharmacopœia edited by Waring in 1868 may be said to be a compendium of the British and Indian Pharmacopœias, as it not only contains the British Pharmacopœia of the period but also gives a description of the botanical names, characters, preparations and uses of almost every useful Indian drug which were ascertained after careful research and experimentation by the followers of western medicine, both European and Indian. The Bazaar medicines in India by the same author is a useful supplement to the Indian Pharmacopœia. Mohideen Sheriff's supplement to the Indian Pharmacopœia is another valuable publication which gives the botanical and vernacular names and where necessary detailed description and distinguishing characters of the Indian drugs noted in the Indian Pharmacopœia. The first part of the Materia Medica of Madras published by Mohideen Sheriff before his death gives a full account of the indigenous drugs described in it, and had that distinguished author and investigator lived to complete the work, the Materia Medica of Madras would have proved to be a work of great utility and usefulness. The vegetable Materia Medica of Western India by Dymock is an abridged Pharmacographia of India and is a valuable guide for the study of Indian drugs. Much labour and time must have been devoted to its compilation. It not only treats of drugs indigenous to India but also gives a description of the source, properties and uses of those imported into India from other countries and used by hakeems and vaidyans. Taleef Sheriff translated by Playfair mentions 1,055 articles and gives a summary of the properties and therapeutical uses of those amongst them which are used in Unani medicine. Most of these drugs are common to Ayurvedic and Unani Materia Medica. Materia Medica by Khory and Katrack is a compendium of the British and Indian Pharmacopœias. These authors give a fuller account of the indigenous Indian drugs than is contained in Waring's Indian Pharmacopœia. The Materia Medica of the Hindus consisting of three parts, viz., mineral, vegetable and animal, published in 1877 by U. C. Dutt is an extract from the well-known Ayurvedic works and treats of the properties of the important indigenous drugs and of their reputed compound preparations. This Materia Medica also gives a short description made by the Sanskrit writers of (1) classification of medicines, (2) actions of medicines, (3) preparation of medicines, (4) modes in which medicines are applied, (5) the weights and measures used in ancient days. Kanny Lal Dey's book published in 1896 on indigenous drugs in India gives a description of their sources, characters and important medicinal uses. The book also contains the botanical classification of drugs. "The Indian medicinal plants" recently published by Basu and Kirtikar and a retired officer of the Indian Civil Service, also contains useful and valuable information regarding the characters, properties and uses of Indian drugs. All these publications will go to show that since the time of Ainslie, there has been a marked and increasing interest manifested, by the members of the medical profession in India, in the investigation of indigenous drugs. That the Government of India were not lacking in interest in this important subject would be evident from the fact of their appointing a committee of eminent members of the medical profession with branches in several provinces 'to consider the desirability of extending the use of indigenous drugs in India.' The report of the Committee on Indigenous Drugs already referred to is the result of the work of this committee. Any one who has perused through the Pharmacographia of India will find that in connexion with chemical researches on indigenous drugs, the painstaking labours of Warden and Hooper have probably left little of anything important in the domain of Indian Pharmacology that was still unisolated. The articles employed by the Hindus in

medicine are extremely numerous. Many substances are daily prescribed with but dubious or trifling virtue, if, indeed any virtue to be recommended. From what I have seen, the science of Hindu medicine is still sunk in a state of empirical obscurity. In the town of Madras and in my tours in the districts I have come across many vaidyans and hakeems whose knowledge of the drugs is crude and unintelligent. Most of them are industrious and well-meaning and except in a few instances I was able to get from them all the information they could give me. A few of them, among the several I came across, were able to exhibit their knowledge by repeating by heart verses from the well-known Sanskrit writers like Charaka, Sushruta, Vagbhada, Madhava and also verses from Augustier, one of the most reputed of the Tamil saints who wrote several volumes in verse on Hindu medicine and philosophy. In vain have I attempted to find any drug or medicine whose reputed marvellous properties are shrouded in mystery or have not been already known. For the purpose of this investigation I have had to refer to the ancient Hindu medical treatises such as Charaka-samhita, Susruta-samhita, Vagbhada's Astangahridayam, Madhava Nidana and these books, it is said, were written some hundreds of years ago; but at what exact period, it is next to impossible to ascertain. Several commentators of these works have tried to fix the dates from contemporary events but as it is not necessary to quote them here for the object of my investigation, I shall not trouble myself by entering into a discussion on the subject. The Tamil medical works were many of them originally written in high Tamil (Yelacanam) which is considered to be a peculiarly energetic and richly cultivated language. These Tamil works or shastras are said to be less shackled with the mythological doctrines of the original Ayurveda, to contain a great number of formulæ and to show a minute attention to the discussion of morbid symptoms. But they also, like the original Ayurveda, evince a firm conviction and belief in the intervention of evil spirits, and offer many curious and absurd rules for averting their machinations. The path of investigation is beset with many embarrassments and difficulties. The first embarrassment I had to encounter while attempting to study the properties of drugs was in connexion with the hypothesis of the three humours, wind, bile, and phlegm which forms in Hindu medicine the basis of the ætiology, symptomatology, diagnosis, prognosis and treatment of diseases. All diseases are supposed to be caused by the derangement of one, two or all the three humours together. Different interpretations have been given to these humours by eminent Kavirajs, Pandits, and Vaidyans. With no pretensions whatever to any critical study of this subject, I must confess the more I have exerted to make a study of these humours the more have I got into deep mire. Kavirajs and Pandits are doing their level best to reconcile and bring them into accord with the modern views of physiological functions and pathological conditions. But I do not think they have succeeded or can succeed in their attempt. The hypothesis of derangement of humours in connexion with diseases might have formed a working basis in the ancient days of Maharishis and long before Harvey discovered the circulation of the blood; but it cannot hold good against the rational scientific physiology of the present day. In describing the properties and uses of individual drugs and particular combinations of medicines, the Sanskrit writers enter into minute details regarding their special influence on the humours on which they say the machinery of life depends and often indulge in very exaggerated statements; for example a medicine prescribed for a particular disease is considered not only to cure that disease but also a host of other diseases. Take for instance the properties and uses of chebulic myrabolans (ordinary myrabolans, Tamil, kadukkai) as described in Astangahridayam, Suthrasthanam:—Astringent, indifferently sweet, pungent, sour, bitter, possesses heating powers, promotes digestive powers, digests food lying undigested in the stomach, prolongs the period of youth, laxative, preserves and prolongs life, strengthens memory, increases vital powers, cures leprosy, discolouration of skin, loss of voice, chronic fevers, poisonous fevers, disease of brain, eye diseases, anæmia, heart diseases, jaundice and grahani, consumption, abdominal tumours, dropsy, dysentery, swooning, morbid secretion of urine, asthma, cough, excessive salivation, piles, enlarged spleen, flatulence, ascites, colic lumbago, loss of taste, and other diseases arising from the derangement of phlegm and wind humours.

A similar embarrassment is experienced when an endeavour is made to understand the classification and symptoms of diseases for the purpose of prescribing appropriate medicines. For example, in Madhava Nidana, fever is described as a separate entity or disease by itself. All fevers are said to be the result of the derangement of one, two or three humours, and there are several varieties of fevers described. When all the three humours are deranged badly, the fever is said to be *sannipatha* or *typhoid*. There are 13 varieties of typhoid fever alone described in this book each with symptoms peculiar to it. It can be safely said that much ingenuity and skill are exhibited by the ancient Sanskrit writers in their methods of classification and descriptions of the causation and symptoms of disease. Considering the period at which their works were written, it must be said that such skill was exceedingly creditable to those great and erudite authors; but I am constrained to observe here that their hypothesis with reference to the classification and ætiology of diseases is entirely out of date and will not stand the test of the rational science of the present day. Another difficulty I had to encounter was in procuring reliable individual drugs dry or fresh from the bazaar. In the case of several drugs, I had no previous experience and had to verify them by description taken on trust from others.

In my tours into the districts, I was greately helped by the revenue authorities who always kindly arranged with hakims and vaidyans practising in and around the station to meet me at a previously appointed place. In these tours I met those vaidyans and hakims and had discussions with them. They were one and all very genial, and well disposed, but many of them I found to possess only very elementary and crude knowledge of diseases and drugs.

On the West Coast, the treatment adopted generally consists of the administration of medicines prepared from vegetable drugs in the form of decoctions, medicated ghee, medicated oils, powders, pills and confections. On the East Coast, in the Northern Circars, and in the southern districts although the same method is followed to a considerable extent, treatment by mineral drugs is adopted in the form of bhasmams and sindhurams, pills, etc., on a very extensive scale. These mineral drugs chiefly consist of mercury and its compounds, oxides and sulphides of arsenic, iron, zinc, lead, tin, gold and silver and some of their compounds, oxide of aluminium, carbonates of sodium and potassium, nitrate of potash, chloride of sodium, borax, coral, pearl and mica or talc.

The Unani hakims also use almost every drug used by the vaidyans. They attribute heating and cooling effects on the system to every drug. The hakims generally make their medicines palatable and sweet by the admixture of honey and syrup and their tonic preparations are generally mixed with powdered gold leaf or silver leaf.

The cost of important compound-drugs prepared by vaidyans and hakims is in several instances almost prohibitive and it would not be possible except for the well-to-do to undergo treatment by such drugs. Enquiries were made of the hakims and vaidyans to ascertain if they had specific or general treatment for the following diseases:—Cerebral apoplexy, plague, hemiplegia, paraplegia, locomotor ataxy, progressive muscular atrophy, pseudohypertrophic paralysis, spastic paralysis, acute mania, different forms of Bright's disease, cirrhosis of liver and kala-azar. None of them were able to give me anything which would prove useful in these diseases, but all of them were straightforward in stating that these diseases were beyond the scope of successful treatment by them. The drugs which they mentioned for the treatment of leprosy, tubercular diseases and diabetes were found to give temporary relief to a few patients suffering from mild forms of those diseases, but no reliance could be placed on them to effect a complete cure. They have a host of drugs for all fevers, some of them, no doubt, useful though slow in action. They have a large number of prescriptions for the treatment of affections of bowels, viz., dysentery, diarrhœa, etc. Most of these prescriptions are really useful but as in the case of anti-malarial drugs, their action is very slow. I have been able to collect a large number of prescriptions for various diseases. Some of them I have been able to use, others I have considered to be useless and some I could not use for want of suitable patients. I have now been able to understand in a much better manner the various methods of

preparation employed in Hindu Pharmacy and I have not found anything new to modify the opinion which I gave about them in my preliminary report. Treatment by massage with medicated oils, by the application of medicated oils and other fluids in a special manner to the head, and by slow douching of butter-milk and other liquids on the head, is largely resorted to on the West Coast for the cure of various diseases. In Appendix No. 9, I have given a short summary of these methods. Considering what has already been done in drug research and pharmacology, vaccine and serum therapy, in animal therapy, ionic medication and other methods of treatment by electricity, treatment by heat, light and cold and treatment by massage, I am of opinion that there is very little if anything for us to learn from the methods of treatment followed by the vaidyans and hakims.

I understand that in the lectures on Materia Medica at the Madras Medical College, the practice of including some of the important Indian drugs has of late been dropped. I would suggest the inclusion in that course of the indigenous drugs noted in Appendix No. 8, as it would serve as a guide to those students who are inclined to widen their knowledge of the subject.

Sub-Assistant Surgeon N. S. Subrahmanyam was posted to assist me on the 8th November 1918. He has worked under me zealously, willingly and loyally and has been of much help to me in conducting this special work.

My thanks are due to the Medical Officers and Staff of the General Hospital for having placed at my disposal patients whom I selected for the purposes of this investigation. In the districts I found the medical officers always willing to help me and I now thank them for all the assistance they rendered me.

In conclusion I have to express my gratitude with thanks to Major-General G. G. Giffard, C.S.I., K.H.S., I.M.S., for the support and encouragement kindly extended to me in the performance of this onerous work.

I have the honour to be,

Sir,

Your most obedient servant,

M. C. KOMAN,

Honorary Physician and Officer in charge of Investigation into Indigenous Drugs, Madras.

[Appendix.

Appendix No. 1.

Comparing some indigenous drugs with some of the drugs in the British Pharmacopoeia.

Appendix No. 2.

Single drugs investigated.

Appendix No. 2-*B*.

Compound preparations investigated.

Appendix No. 3.

Classification of drugs based on their properties.

Appendix No. 4.

Summary of the notes on the medicines investigated.

Appendix No. 5.

List of compound preparations collected and investigated with their composition.

Appendix No. 6.

Statement showing the diseases treated by Ayurvedic and Unani medicines from 12th July 1918 to 31st December 1919.

Appendix No. 7.

The Chemical Examiner's report on some drugs.

Appendix No. 8.

List showing some of the important Indian drugs, suggested to be included in the lectures on Materia Medica.

Appendix No. 9.

A summary showing the methods of treatment by medicated oils, etc., peculiar to Malabar.

APPENDIX No. 1.

Comparison between Indigenous Drugs and those of the British Pharmacopœia. For the purposes of this comparison only a few drugs are taken from each head and classified according to their properties.

ANTHELMINTICS.

There are about forty indigenous drugs which are said to possess the property of expelling worms from the alimentary tract. The chief amongst them are:—

(1) Butea frondosa.
(2) Chempullanhi (Colycopterus floribunda)
(3) Kirmani (Artemesia maritima)
(4) Cleome viscosa.
(5) Vernonia anthelmintica.
(6) Chenopodium ambrosioides.

I have administered all these drugs and found them to be far inferior to santonin for the expulsion of round worms and to thymol for the expulsion of hook worms. Kirmani, which consists of an admixture of the flower heads, stalks and leaves of Artemesia maritima was the most efficacious among the indigenous drugs in expelling round worms. This plant is said to grow on the western Himalayas. It is from the flower heads of this plant that santonin is obtained. As the powder 'Kirmani' can be obtained cheap (12 annas a pound) it may be substituted for santonin especially as the price of the latter has risen high.

Tender leaves of Chempullanhi (Colycopterus floribunda ?) possess also anthelmintic properties to a considerable degree. They have both laxative and anthelmintic properties and do not require a purgative after administration for the expulsion of the round worms, but they are not so certain in their action as santonin. The other drugs mentioned above have only very feeble anthelmintic properties when administered alone.

ANTI-SYPHILITIC REMEDIES.

The vaidyans generally treat all syphilitic diseases, whatever stage they may be in, by first administering for three or four days a specific purgative oil which contains several vegetable drugs, chief amongst which are:—

(1) Smilax chinensis.
(2) Hemidesmus Indicus.
(3) Vitex negundo.
(4) Bark of Pongamia glabra.
(5) Thespesia populnea.
(6) Sida cordifolia.
(7) Purified croton seeds.
(8) Castor oil.

This is followed by the internal administration of some preparation containing mercury or its compounds like calomel or corrosive sublimate. In the case of rich patients costly compounds like Poornachandrodayam which contains mercury, gold, orpiment, sulphur, etc., are administered in preference to cheaper compounds of mercury. One now and then comes across patients suffering from the injurious results of the indiscriminate use of mercurial preparations in the form of oils and powders indiscreetely administered by quack vaidyans for the relief of syphilis, skin diseases, nervous diseases, chronic rheumatism, etc. Mercury and several of its compounds are also largely used by the allopathic practitioners chiefly in the treatment of primary and secondary stages of syphilis, but their administration is always conducted in such a careful and methodical manner as to prevent the occurrence of any injurious effects. Poornachandrodayam which is very much extolled by the vaidyans as a sovereign remedy in syphilis was administered to a patient with syphilis for 40 days after a preliminary treatment for five days with the specific oil for syphilis. This patient who was suffering from syphilitic rupia all over the body derived some benefit from the above treatment. Several of the ulcerated patches on the skin healed up but two of them remained persistent and callous and the patient had therefore to be given an intravenous injection of salvarsan (Ampsalv). The callous ulcers healed in four days after the injection. Other patients who were admitted for the same disease about the same time as this patient and who had salvarsan treatment were able to leave the hospital relieved in the course of seven to ten days. It will be evident from this that the action of Poornachandrodayam is very slow and does not compare favourably with that of salvarsan.

The preparations of mercury in the British Pharmacopœia which are intended for curing syphilis are as good as, if not better than, those used by the vaidyans.

ANTIDIABETICS.

Chief drugs used in diabetes are:—

(1) Abbrak or Talc Bhasmam.
(2) Silajit.
(3) Cassia Auriculata.
(4) Eugenia Jambolans.
(5) Lodoicea Seychellaram.
(6) Cocculus villosus.
(7) Tinospora cordifolia.

Under proper diet all these drugs are able to reduce the output of sugar in the urine to a certain extent and no further; but as soon as the medicines are stopped, there is a return to the original condition. *In one case where there was a complete disappearance of sugar from the* administration of Silajit and Talc (Mathu megah mani pills) the sugar reappeared immediately after stopping the pills. Vasantha Kusumakara Rasa which is a compound of several metallic basmams acts as a nervine tonic and slowly reduces the quantity of sugar in the urine but its cost is prohibitive except to the rich. Even after its long continued use, I have not come across a single case in which the quantity of sugar had completely disappeared. Among the ayurvedic drugs I would recommend Abbrak Basmam (Calcined 100 or 1000 times) and Vasantha kusumakara Rasa for the relief of diabetes.

Codeia, opium, morphia, arsenic, and salicylates which are used as anti-diabetics by us are as good as any of the ayurvedic medicines in giving relief to diabetic patients. Complete disappearance of sugar from the urine has been noticed in several cases of diabetes which were treated with the drugs of the British Pharmacopœia mentioned above under proper hygienic and dietetic conditions.

Alteratives.

There are several alterative drugs in Hindu medicine. Mercury and several of its compound preparations like :—

(1) Nithyanandha Rasa.
(2) Mriganka Rasa.
(3) Sarwanga Sundara Rasa.
(4) Laxmivilasa Rasa.

are considered as strong alteratives and are used as alterative tonics in several diseases. Amongst the vegetable alteratives, the chief are :—

(1) Amoora Rohithaka.
(2) Clerodendron serratum.
(3) Celastrus Paniculata.
(4) Gynocordia Odorata.
(5) Calotropis Gigantea.
(6) Hemidesmus Indicus.
(7) Pongamia Glabra.
(8) Tinospora Cordifolia.

The most important alterative medicines of the British Pharmacopœia are iodine and its *compounds, mercury and its salts. There are several other less important alterative medicines,* such as arsenious acid, ammonium salts, antimony salts, salts of gold and silver, thyroid extract, sarsaparilla, etc. Some of the mercurial compounds of the vaidyans act very well as alteratives and improve the health and tone of the body. But there is no drug in their Pharmacopœia which could be considered equal in its action to that of the iodides. Thyroid extract for the relief of myxaedema stands by itself and there is nothing in the Hindu or Unani Pharmacopœia which acts as an efficient alterative in that disease like thyroid extract.

Expectorants.

The chief expectorant indigenous drugs are :—

(1) Justicia Adhatoda.
(2) Urginea Indica.
(3) Bamboo manna (Bambusa arundinacea).
(4) Unbaked camphor.
(5) Calcined coral and pearl.
(6) Shwaskutara Rasa.
(7) Mriganka Rasa.
(8) Eladi Churna.
(9) Lavangadi churna.
(10) Sitopaladi Churna.

In the British Pharmacopœia the principal expectorants are :—

(1) Ammonium salts.
(2) Iodides.
(3) Liquorice.
(4) Ipecacuanhae.
(5) Squill.
(6) Pinus sylvestris.
(7) Senega radix.
(8) Euphorbia Pilulifera.
(9) Lobeliae.
(10) Pellitory.

As far as expectorants are concerned, although there are several useful drugs and preparations in the British Pharmacopœia, I would suggest that *Justicia adhathoda should be given* a more extended trial than has been hitherto done and that calcined coral also should be given a fair trial.

Anti-periodics.

The principal anti-periodics of the vaidyans are :—

(1) Azadirachta Indica.
(2) Ophelia chirata.
(3) Alstonia scholaris.
(4) Tinospora cordifolia.
(5) Berberis aristata.
(6) Oldenlandia herbacea.
(7) Picrorrhiza Kurroa.
(8) Trichosanthes Cucumerina or Dioica.
(9) Caesalpinia bonducella.

A fair trial has been given to all these drugs and I am able to assert that the alkaloids of cinchona (quinine, etc.) are far superior in their action as anti-periodics to all the indigenous drugs mentioned above. There are several compound preparations which vaidyans use as anti-periodics to mention a few :—

(1) Sudarsana churnam (Leghu and Brihat).
(2) Pantchathikthakam.
(3) Anandhabhairavi.
(4) Swatchandha Bhairavi.
(5) Narayana Jwarankusa.
(6) Maha Jwarankusa.

I have found that the action of these preparations is very slow and is inferior to that of the salts of quinine.

Anti-Pyretics.

The following are the principal diaphoretics and antipyretics amongst the indigenous drugs :—

(1) Tinospora Cordifolia.
(2) Vernonia cinera.
(3) Dæmia extensa.
(4) Viola odorata.
(5) Coscinum fenestratum.
(6) Aconitum ferox.
(7) Oldenlandia herbacea.
(8) Alstonia scholaris.
(9) Picrorrhiza kurroa.
(10) Ocimum sanctum.
(11) The ten roots.

All these drugs gradually reduce the temperature in mild fevers like a solution of acetate or citrate of ammonia, but they do not possess the powerful diaphoretic or anti-pyretic action peculiar to drugs like aspirin, anti-pyrin or phenacetin. Except *Aconitum ferox*, other indigenous drugs mentioned above are not harmful and may be safely administered in the form of decoction.

Tonics.

In Ayurvedam and Unani, there are good tonics for the blood, stomach and nerves such as :—

(1) Calcined iron.
(2) Oxides of iron.
(3) Iron Pyrites basmam.
(4) The three myrabolans.
(5) Ashta churna.
(6) Bhaskara salt.
(7) The five bitters.
(8) Jawarish-a-kamoon.
(9) Aaziraisah.
(10) Majoonai khuvathibah.
(11) Laximivilasa Rasa.
(12) Calcined gold, chandrodaya Makhardhwaja.
(13) Amritha-prasa ghritha.
(14) Chyavanprash.
(15) Compound powder of Withânia somnifera.
(16) Silajit.
(17) Sida cordifolia.

In the British Pharmacopœia, there are tonics corresponding to the above such as the several preparations of iron, phosphorus, nux vomica, vegetable stomachics like calumba, quassia and gentian, hypophosphites, codliver oil, damiana, cocoa, cardiac tonics like digitalis, squill, strophanthus, etc.

Cathartics or Purgatives.

There are several vegetable drugs used as purgatives by vaidyans and hakims : chief amongst them are :—

(1) Cassia fistula.
(2) Ipoemea Turpethum.
(3) Purified croton seeds.
(4) Castor oil.
(5) Senna leaves.
(6) Rose buds.

The British Pharmocopœia divides purgatives into aperients, simple purgatives, cholagogues and drastic cathartics. The important purgative medicines are :—

(1) Jalap.
(2) Senna.
(3) Castor oil.
(4) Cascara sagrada.
(5) Elaterium.
(6) Colocynth.
(7) Euonymin.
(8) Podophyllin.
(9) Croton oil.
(10) Certain salts as sulphate and tartrate of soda.
(11) Sulphate of magnesia.

Ipoemea turpethum which is largely used by the vaidyans on the west coast as a purgative is in its action equal to ipœmea jalapa (jalap) and may well be substituted for it. It can be obtained cheap and is available in all the local drug bazaars. A compound powder corresponding to the compound powder of jalap can be prepared with it without difficulty. The pulp of the pod of cassia fistula is largely used as an aperient by the hakims. Rhubarb (Reval Chini) is also used as a laxative by the hakims.

Diuretics.

The important diuretics amongst the indigenous drugs are :—

(1) Boerhavia diffusā.
(2) Cubeba officinale.
(3) Tribulus terrestris.
(4) Moringa pterygospermum.
(5) Santalum album.
(6) Nitre.
(7) Seeds of cucumber.
(8) Silajit.
(9) Urginea Indica.
(10) Chicoria endivia.
(11) Viola odorata.

In the British Pharmacopœia there are more satisfactory diuretics such as scopari, buchu, uvae-ursi, diuretin, certain salts of potassium and sodium, digitalis, squill, also proprietory medicines like anasarcin, salts of theocin, urotropine, etc. These drugs are more rapid in their action when administered in regulated doses, than most of the indigenous drugs mentioned above. I have found Boerhavia diffusa to be a fairly good diuretic especially when combined with iron in the dropsy of anæmia and chronic Bright's disease.

I must not fail to mention here that fresh ginger juice (Zingiber officinalis) has been ascertained to be a good diuretic for relieving ascites and dropsy arising from early cirrhosis of the liver. The method of administering and dosage, etc., are mentioned under single drugs (Zingiber officinalis). The ginger juice did not give satisfactory results in dropsy associated with advanced cirrhosis of the liver, chronic Bright's diseases, and valvular diseases of the heart.

APPENDIX No. 2-A.

SINGLE DRUGS, INVESTIGATED.

1. *Alstonia scholaris.*

Nat Ord.—Apocynaceae.

Ver.—Tam.—Elilaippalai. Mal.—Elilampala. Tel.—Edakulariti chettu.

The bark of this plant is said to be a powerful tonic and antiperiodic. This bark contains an alkaloid ditamin, which was obtained in the form of an acetate in the year 1875 by Jobston Hessie. For the other bases contained in this bark, see its chemical composition in Dymock's Vegetable Materia Medica. This ditamin or ditain is said to be a very powerful anti-periodic. Tincture and decoction prepared from the bark of this plant were tried in several cases of malarial fever with favourable results. It took a much longer period than quinine to check intermittent fevers, but there is no doubt that it has considerable anti-periodic properties. It acts as a general tonic in combination with ginger.

2. *Asparagus racemosus.*

Nat. Ord.—Liliaceae.

Ver.—Tam.—Sathavari, Panniyanaku. Mal.—Sathavari. Tel.—Pillapeecharagadda.

The name sathavari (that is possessing 100 roots) is in allusion to the numerous fusiform tubers of this plant.

The tubers are considered to be nutrient, tonic, and demulcent and are given in biliousness, dyspepsia, diarrhœa, and general debility. On the west coast, the tubers are eaten candied or pickled for correcting the derangement of bile humour and also as an appetiser. A decoction of the drug was administered as a stomachic tonic in atonic dyspepsia, but the action was found to be slow and the result not encouraging.

3. *Anisomeles malabaricum.*

Nat. Ord.—Labiateae.

Ver.—Tam.—Peymurathu. Tel.—Moga bera. Mal.—Karinthumba.

An infusion of the leaves of this plant is given on the west coast to children in colic, dyspepsia and fever arising from teething. The infusion acts as a diaphoretic. An infusion (1 in 10) was tried in fever accompanying teething and was found useful.

4. *Anacyclus pyrethrum (pellitory).*

Nat. Ord.—Compositeae.

Tam.—Akkilakaram. Mal.—Akklakaram. Tel.—Akkalakara.

The vaidyans prescribe this drug in combination with the lesser galanga and ginger as a cordial and stimulant in palsy and in cases of lethargy. Pellitory has long been recognised as a sialagogue and is used in gargles for relieving toothache and aphthous ulcers.

I was informed by the patient referred to in the notes on areca catechu (No. 5), that it was a specific in pulmonary and glandular tuberculosis. I adopted in eight cases his method of treatment which is as follows:—

"An ounce of the fresh juice squeezed out of tender arecanuts (half grown) to be given half an hour before every meal.

Akarakarha or karha root.—16 ounces by weight.

Senna leaves 2 ounces by weight.

ground on a grinding stone into a fine pulp and then made into pills of the size of William's pink pills with the aid of bees' honey; 10 to 20 pills at a time to be taken after every meal."

Three cases of fairly advanced pulmonary tuberculosis in the hospital were put on this treatment and all of them derived much benefit from it. All the patients gained weight and strength and their condition was very much ameliorated. The cough and the expectoration diminished to a great extent, the hectic fever also went down. Tubercle bacilli were present in the sputa of all these three cases on admission. In five out cases the same treatment was adopted. One was an advanced case of pulmonary tuberculosis with diabetes. He did not derive any benefit from the treatment. The second was a case of intestinal tuberculosis; the treatment made the patient's condition worse. The third, a case of pulmonary tuberculosis was very much relieved of the symptoms but he had to give up the treatment as complications of a constitutional disease set in 2 months after the treatment was begun. Two other out-cases had the treatment only for a few days.

I cannot say positively that the improvement noticed in the three cases treated in the hospital was entirely due to this special method of treatment; probably to a great extent it was the result of the nourishing diet, rest and open air which they had in the hospital.

5. *Areca catechu.*

Nat. Ord.—Palmaceae.

Tam.—Pakku. Mal.—Kazhangu. Tel.—Poka-vakka.

The arecanut is largely used in India as a component of the betel nut for chewing. On the suggestion of a patient who informed me that he was cured of his consumption by a preliminary administration of the fresh juice of tender arecanuts followed by a prolonged use of Anacyclus pyrethrum (see drug No. 4 supra), this drug was given to eight patients. The dose

suggested was 5 ounces of the juice to be gradually sipped in the morning in the course of an hour or two. None of the patients could stand this dose, as it produced violent vomiting and purging. The dose was consequently reduced to half an ounce. Even half an ounce had a nauseating effect and generally produced 2 or 3 evacuations. I cannot understand why this preliminary treatment by this special method of purgation is considered necessary. As stated above the juice of the tender nuts acts in small doses as a laxative.

6. *Acorus calamus.*

Nat. Ord.—Aroideae.

Tam.—Vasambu. Mal.—Vayambu. Tel.—Vasa.

The rhizome of this plant is said to be a good stomachic and carminative and in dose of about 90 grains, emetic. It enters into several carminative prescriptions for children. A decoction of this root stalk was given to several cases of indigestion and found to be efficacious.

7. *Adenema Hyssopufolia* (*Cicendia Hyssopufolia*).

Nat. Ord.—Gentianacea.

Ver.—Tam.—Vellarugu. Tel —Golimidi. Mal —?

This plant has stomachic and laxative properties; is also used in dysuria, gonorrhoea, gonorrhoeal rheumatism, pruritis and scabies. I have used 'Succus' (of this plant) and compound oil for gonorrhoea and gonorrhoeal rheumatism and found them to be useful in those complaints.

8. *Andrographis Paniculata.*

Nat. Ord.—Acanthaceae.

Ver.—Tam.—Nilavembu Mal.—Kiriyat. Tel.—Nelavemu.

The Hindu physicians consider it to be cold and dry, light and flatulent, a remedy for colds and cough and bilious affections, burning of the body and the fever arising from the derangement of the three humours which they call "Sannipath". The herb is much esteemed by Hindu physicians on account of its tonic and febrifuge properties, and prescribed in malarial fevers attended with burning of the body in combination with aromatics such as ginger, and lemon grass. Dymock notes that it contains two bitter principles chemically—ophelic acid and chirettin. A tincture of chiretta was administered to cases of malarial fever, atonic dyspepsia and debility after malarial fever and was found to be useful in those ailments. Chiretta in tablets obtained from a chemist in Bombay was administered to a woman suffering from chronic malaria who could not tolerate quinine. A protracted use of the drug cured her.

9. *Acalypha Indica.*

Nat. Ord.—Euphorbiaceae.

Ver.—Tam.—Kuppamani. Mal.—Kuppamani. Tel.—Kuppintaku.

The leaf of this plant is said to be an antiparasiticide and is applied externally ground with common salt or quicklime or lime juice. A paste of the leaves with lime juice was prescribed for cases of ringworm (different varieties of cutaneous taenea). In chronic cases it had no effect but in recent cases it did some good. Hakims use the entire plant in the form of decoction as a safe and speedy laxative in doses of ½ to 1 fluid ounce.

10. *Artemisia maritima.*

Nat. Ord.—Compositeae.

Ver.—Tam.—Machipatri? Mal.—Nilampala? Tel.—Macipatri?

Kirmani powder consisting of the flower heads with an admixture of small stalks and leaves of Artemisia Maritima was tried as an anthelmintic in cases of Ascaris Lumbricoides (round worms) and was found to be efficacious in expelling them with the aid of castor oil. This plant grows according to Kanny Lal Dey at high altitudes on the western Himalayas. The flowers contain the important glucoside santonin. The powder was given in doses of 10 to 20 grains to children and 30 to 60 grains to adults.

11. *Ailanthus Malabaricum*—

Nat. Ord.—Simarubeae.

Tam.—Peru maram. Mal.—Perumaram. Tel.—Peddamanu.

This tree is found growing on the west coast and yields a fragrant resin known as mutti-pal (simaruba) used in the Indian jails as an excellent remedy in dysentery. The juice of the bark administered in curd or milk twice a day is a favourite remedy on the west coast for the cure of diarrhœa and dysentery. Fifteen cases of dysentery amongst out-patients were treated with the juice of the bark with very satisfactory results. At Cannanore Dr. Thummon Singh, medical officer of the central jail there, told me that he found simaruba a very efficacious remedy for dysentery among the jail population. Manson in his "Tropical diseases" also speaks highly of its efficacy in dysentery.

12. *Astercanthus Longifolia or Hygrophilla Spinosa*—

Nat. Ord.—Acanthaceae.

Tam.—Neremulli. Tel —Neerugubbi. Mal.—Vayalchulli.

The leaves of this plant are cooling and are used in jaundice and anasarca, the root is considered a cooling bitter tonic, with diuretic properties, and is used in rheumatism, urinary affections and anasarca. The ashes of the plant are used as a diuretic in dropsy. A decoction of the root was used in 1-ounce doses as a diuretic in dropsy of chronic Bright's disease, and found to be a fair diuretic.

13. *Amoora Rohithaka*—
Nat. Ord.—Maliaceae.
Ver.—Tam.—Shem-maram. Tel.—Chawa-Manu. Mal.—?

The powdered bark is said to be very beneficial in cases of enlarged spleen. It was administered to a case of enlarged spleen with no benefit.

14. *Boerhavia diffusa*—
Nat. Ord.—Nyctaginaceae.
Ver.—Tam.—Mukku-rattai. Mal.—Thazhuthama. Tel.—Punarnava.

Vaidyans consider the root of this plant to possess laxative, diuretic and stomachic properties. The powdered root either alone or combined with oxide of iron (Punarnava Manduram) was given in several cases of anasarca, the result of Bright's disease or anæmia; the drug acted as a diuretic in every case and the patients derived much benefit from its use. Dose of the powdered root is 30 grains three times a day.

15. *Berberis aristata* –
Nat. Ord.—Berberideae.
Ver.—Tam.—and Mal.—Kasturi-Manjal. Tel.—Kasturi-Pasupu.

Kanny Lal Dey says that the root bark has antipyretic and diaphoretic properties, and is used in cases of intermittent fever. He says, as an antiperiodic, it possesses some advantage over quinine inasmuch as in frequently repeated doses it does not produce depression of the system and deafness, and may be used even during the attacks of fever. A decoction of the root bark in doses of 1 to 2 ounces was given to several out-patients for malarial fever and was found to be beneficial, the effect being very slow.

Chemical composition.—The root and the wood contain the alkaloid, berberine.

16. *Brassica campestris*—
Nat. Ord.—Crucifereae.
Tam.—Kadugu. Mal.—Vella Kadugu. Tel.—Avalu.

Siddhartha or white mustard is the seed of this plant. The seeds are used externally like the ordinary mustard; they are said to have beneficial effect when administered internally in cases of nervous diseases such as epilepsy, hysteria and are recommended to be given with Brahmi gritha in such cases. The medicated oil called siddhartha gritha was so administered in a few cases of epilepsy and hysteria with some benefit. Dose ½ drachm of the medicated oil.

17. *Clerodendron Serratum*—
Nat. Ord.—Verbenaceae.
Ver.—Tam.—and Mal.—Cheruteku. Tel.—Gantu Bharangi.

It is given in catarrhal affections of the lungs, rheumatism and dyspepsia. A decoction of the root of this plant (1 in 20) was administered to cases of catarrhal bronchitis with little or no benefit.

18. *Cardiospermum Halicacabum*—
Nat. Ord.—Sapindaceae.
Tam.—Moodokothan. Mal.—Uzhinja. Tel.—Buddakakara.

The root of this plant is considered to be emetic, laxative, stomachic and anti-rheumatic. A decoction of the root (1 in 10) is given in half an ounce dose in amenorrhoea and piles. The leaves smeared over with castor oil are applied over rheumatic joints. The decoction was given in the out-patient department to cases of chronic rheumatism with negative result.

19. *Croton Tiglium*—
Nat. Ord.—Euphorbiaceae.
Ver.—Tam.—Nirvalam. Mal.—Nirvalam. Tel.—Nepalam.

Croton oil of the British Pharmacopœia is obtained by expression from croton seeds and is a powerful hydrogogue cathartic in doses of 1 to 2 drops. The powder prepared according to the following method which is in use by Hindu physicians was largely used as a laxative and purgative in several cases especially in cases of leprosy for which a preliminary treatment by purgation is considered necessary by those who treat that disease. After decorticating the seeds, they were put into cowdung and water just enough to cover them and boiled. They were then taken out and boiled again in milk. After removal from milk, the seeds were dried and the small sprout between the cotyledons from each seed was removed. The seeds were thereafter broiled on an iron plate over fire until all oily matter was to all appearance expelled from them. The seeds were then pounded into powder. This powder was mixed with equal part of powdered cumin seeds and administered in doses varying from 5 to 10 grs. with very satisfactory result.

20. *Cassia Tora*—
Nat. Ord.—Leguminosæ.
Ver.—Tam.—Thagaray. Mal.—Thakara. Tel.—Thagirisa.

The leaves, the seeds and the root of the plant are said to contain chrysophanic acid and are used ground in lime juice as a paste for external application to ringworm. An oil named chakramardha whose chief ingredients are Cassia tora and Eclipta alba was used in cases of ringworm as an external application and found to be very beneficial.

21. *Coscinum fenestratum*—

Nat.—Ord.—Menispermaceæ.

Ver.—Tam. and Mal. Marsmanjal ; Tel. Manu-pasupu.

A decoction of the bark is said to possess tonic and antiperiodic properties. The decoction was administered in doses of 1 to 2 ounces three times a day to several out-patients suffering from malarial fever but no beneficial effects were noticed.

22. *Calotropis gigantea and Procera*—

Nat. Ord.—Asclepiadeae.

Ver.—Tam., Yerukam ; Mal., Yerukam ; Tel., Jilledu.

This is the common mudar plant. There are two varieties of this plant, white and red flowered. The milkly juice, the bark and the bark of the root are used by the Indian practitioners in leprosy, syphilis, diarrhœa, dysentery, rheumatism, elephantiasis and ascites. In intermittent fevers the tincture made from the leaves is highly recommended. The powdered flower is said to be useful in small doses in cough, cold, asthma and indigestion. Tinct; calotropis gigantea was tried as an antiperiodic in cases of intermittent fevers. It was found to be useful in many cases. Powdered root bark in doses of five grains was given to several cases of dysentery and was generally found to give relief.

23. *Caesalpinia Bonducella.*

Nat. Ord —Leguminosæ.

Ver —Tam., Gatchakkoy ; Mal., Kalanjy Kuru ; Tel., Gatchkaya.

Bonduc seeds are reputed to possess anti-periodic properties. The powdered seeds were administered mixed with equal part of pepper powder to malarial patients and were found to possess feeble anti-periodic properties. In malignant malaria, they did not do any good. The leaves and seeds after roasting with castor oil are applied externally to inflammatory swellings especially to inflamed piles, hydrocele and orchitis with benefit.

24. *Cassia Auriculata.*

Nat. Ord.—Leguminosæ.

Ver.—Tam., Avarai ; Mal , Aviram ; Tel., Tangedu.

This is known as tanner's cassia as its bark is used for tanning. It has astringent properties and is highly recommended in diabetes mellitus. A decoction of the entire plant was given in one ounce doses three times a day in diabetes mellitus without benefit.

Chemical composition. The bark contains 25 per cent tannin and ash 5 per cent.

25. *Chenopodium Ambrosioides.*

Nat. Ord.—Chenopodiaceæ

Ver.—Tam., ; Mal., Katu-ayamodakam ; Tel.

The fruits and the volatile oil obtained by distilling the fruits with steam or water are used as anthelmintic chiefly for ascaris and ankylostomum. Powdered seeds from 20 to 30 grains doses were tried with negative results. But the oil in ten minims doses expelled the hookworms.

26. *Chempullanhi* (Colycopterus floribunda).

Nat. Ord.—Combretaceae.

Ver.—Mal., Chempullanhi.

The tender leaves of this plant, I was told, by physicians at Tellicherry and Payyanur were very efficacious in expelling round worms as they possess laxative properties in addition to their anthelmintic properties. A small quantity of the tender leaves obtained from Tellicherry and Cannanore were ground and made into pills of five grains and administered to five in-patients in the General hospital ; three of the patients passed round worms after their administration. I have been trying to get the tender leaves with the help of the officers of the forest department of North Malabar and South Kanara, but the leaves received from them were fully grown and did not act like the tender copper coloured leaves, which I had personally obtained The Chemical Examiner reports that an extract of the leaves gave colour reactions which resembled those of santonin. The botanist of the Agricultural College, Coimbatore, says that the name of the plant is Combretum extensum.

The forest officer who sent me a sample of fully grown leaves from South Kanara says that the name of the plant is Colycopterus floribunda and it belongs to the natural order Combretaceæ. I have not the slightest doubt that it will prove to be a good anthelmintic and a very efficient substitute for santonin, especially as the latter is now sold at an exorbitant price.

27. *Daemia extensa.*

Nat. Ord.—Asclepiadaceæ.

Ver.—Tam., Veliparutti, uttamani ; Mal., Veliparuti ; Tel., Guruticbettu.

This drug was very strongly recommended for malarial intermittent fevers. The juice of the leaves in half ounce doses as advised was administered to a few cases of malaria without any beneficial effect.

28. *Evolvulus alsinoides.*

Nat. Ord.—Convolvulaceæ.

Ver.—Tam., Vishnukranthi ; Mal., Vishnukranthi ; Tel., Vishnukranthi.

This is administered by Hindu physicians in fevers attended with diarrhœa or indigestion in the form of a decoction of the drug with Ocimum sanctum. It was administered to several cases and did not appear to possess the properties attributed to it.

29. *Embelia Ribes.*
Nat. Ord.—Myrsinaceæ.
Ver.—Tam., Vayuvilangum; Mal., Vayuvilangam; Tel., Vayuvilangam.
The fruit is anthelmintic, alterative, and stimulant. It was given to a few cases of suspected Ascaris Lumbricoides without any beneficial effects. I have had no occasion for trying it for tape worms for which it is said to be a specific.

30. *Euphorbia Pilulifera.*
Nat. Ord.—Euphorbiaceæ.
Ver.—Tam., Amampatchai-arisi; Mal., Nelapalai; Tel., Reddinanabrolu.
This is a small herb found nearly all over India. It grows in abundance on vacant plots of land in Madras. There are two varieties one with small purple leaves and the other with larger green leaves. On plucking the leaves or leaf stalk, a milky juice exudes. It is now largely exported to America and to Great Britain. There is no doubt that an extract of this plant has sedative effect on the mucus membrane of the respiratory and genito-urinary tract. It has been found by me very beneficial in cases of asthma. I have been using a tincture of it in my private practice in diseases of genito-urinary tract and in chronic bronchitis and asthma. The result has been very satisfactory. It is a drug which should find a place in the treatment of such diseases. The tincture of the drug was given in 15 to 30 drops to cases of asthma and bronchitis in the hospital with very beneficial effect.

31. *Gudumal.*
Pandit Gopalacharulu gave me a sample of this plant and said that he had obtained it from northern India where it was considered to give relief in diabetes. A decoction of the leaves was given to a patient suffering from diabetes mellitus for nearly two weeks; the quantity of sugar diminished from 21·9 to 8·75 grains per ounce, but as at the same time the patient was on an anti-diabetic diet, it could not be definitely said whether the improvement was due to the drug or the diet. I have not as yet succeeded in finding the botanical and vernacular names and the natural order of the plant.

32 *Gloriosa superba.*
Nat. Ord.—Liliaceæ.
Ver.—Tam., Kalaippai-Kizhangu; Mal., Menthoni-Kizhangu; Tel. Agnisika.
It is said that the root of this plant powdered and reduced to a paste and applied to the navel and supra-pubic region promotes labour pains. For the same purpose, it is said that the paste may be applied to the palms and soles. The vaidyan who gave me the above information at Payyanur also said that the sediment obtained from the powdered root after repeated washings (not less than seven times) was useful in diabetes mellitus, in doses of half a tola twice a day. The powder so prepared from the sediment was administered to a case of diabetes mellitus with no apparent benefit.
Chemical composition :—2 resins, tannin and a bitter principle, superbine.

33. *Hydnocarpus inebrians.*
Nat. Ord.—Bixneae.
Ver.—Tam., Niredu Muthoo; Mal., Niredumuthoo; Tel., Neerudu Vithulu.
An oil prepared from the seeds of this plant is highly valued by the vaidyans as a specific for the cure of leprosy and is considered by them to be superior to chaul-mogra oil. An oil was prepared from the seeds in the following manner. The shells of the seeds were removed, the seeds were pounded and boiled in water; when all the water was driven away by heating, the oil was decanted. Cases of leprosy were treated as under.

Five grains of powdered croton seeds prepared as described under croton seeds, were given every morning for the first 8 or 10 days. This quantity was sufficient to produce 2 or 3 evacuations; thereafter 5 drops of this oil (Oleum hydnocarpus) with equal quantity of python's fat were given and the quantity increased daily by one drop until 30 drops were administered. Three patients who had the above treatment at the Government Leper Hospital showed signs of improvement but the improvement was very slow; one of them complained bitterly of nausea and the quantity of the oil had to be reduced. Two of these patients were chronic cases with nodules on the face and lobes of the ear, ulceration of the fingers and toes, large anaesthetic patches here and there over the body. One of them had a perforating ulcer of the left foot and one had large superficial ulcers on both legs—the third an advanced case of anaesthetic type absconded from the hospital after treatment for two weeks.

Four chronic cases of anaesthetic variety and one of tubercular variety were treated at the hospital with intramuscular injections of equal quantities of oleum hydnocarpus and pythons's fat. Of these one ceased attending after the third injection.

On the first day 10 minims were injected. Injections were continued on alternate days and the dose of the mixed oil increased each time by 5 minims until each patient received 40 minims; 40 minims were injected for a number of days. There was slow but steady improvement. The anaesthesia was gradually disappearing; the ulcers healed one after another, and the thickness of the patches gradually diminished. When the dose reached 30 minims patients began to feel pain at the seat of injection on inserting the needle.

Nothing untoward resulted from these injections such as suppuration; two of these patients were tired of the injections and refused to undergo further treatment. There is no doubt that these patients obtained considerable benefit from these injections. As the improvement was

slow and the disease long standing, all these patients were put under 10 minim doses of the oil of hydnocarpus prepared as above without python's fat and 20 grains of a confection prepared by grinding the kernel of the seeds with cocoanut kernel, ginger and jaggery. The oil was given an hour before breakfast and the confection in the evening. Two more hospital cases of anæsthetic leprosy were put on the last mentioned treatment; but one of them left the hospital immediately after the preliminary treatment.

The ten cases selected from the Leper hospital for this treatment were of 8 to 20 year's duration or more, with perforating ulcers on the feet, contracted fingers and toes, with large ulcers on them. Three of these were tubercular cases and the rest were of anæsthetic variety; some of them had already lost portions of their fingers and toes. Except the nausea referred to in one case, none of the patients complained of any ill effect from the treatment; on the other hand, most of them liked it and some of them were craving for its continuance. Several out cases of six months to two years'duration are now under treatment with the oil and the confection. One of them has shown marked improvement and he is now almost well, sensation having returned and all small patches having disappeared. The other patients are all showing some improvement. From what I have seen I have no doubt that Hydnocarpus inebrians is a potent drug for ameliorating the loathsome complications of leprosy.

34. *Herpestis monniera.*—

Nat. Ord.—Scrophularinaneae.

Ver.—Tel., Sambrani chettu ; Tam., Nirbrahmi ; Mal., Nirubrahmi.

U. C. Dutt says that this plant is considered a nervine tonic useful in insanity, epilepsy and hoarseness of voice—half a tola of the fresh juice of the leaves and 4 grains of Aplotaxis auriculata and honey are to be given in one dose in insanity. Brahmi-Ghritha or a medicated ghee whose chief ingredient is Herpestis monniera was administered in cases of epilepsy and hysteria and in one case of chorea; cases of epilepsy were considerably benefited by its use, the attacks coming on at longer intervals. Hysteria cases were completely cured. The case of chorea did not derive any benefit from it.

35. *Hypoxis orchioides or Curculigo orchioides.*

Nat. Ord.—Amaryllideae.

Ver.—Tam., Nellapana-kilanghu; Mal., Nellapana-kilanghu; Tel.—Nelatha-tigadda.

This tuberous root as sold in the bazaars is about 4 inches long and is in a slight degree bitter and mucilaginous to the taste. It is said to possess tonic and aphrodisiac properties and to be useful in leucorrhoea, menstrual derangements and gonorrhoea.

A compound powder consisting principally of Hypoxis orchioides and Tribulus terrestris was given to two cases of dysmenorrhoea with general debility in the out-patient department but the result could not be ascertained, as the patients did not turn up after the first day. It was administered to two cases of gonorrhoea without any benefit.

36. *Hydrocotyle Asiatica.*

Nat. Ord.—Umbellifereae.

Ver.—Tam., Vallari ; Mal., Kutakam or Muthal ; Tel., Bokuduchettu.

The entire plant is used by vaidyans in derangement of the three humours. The leaves are used as diuretic and are said to be beneficial in skin diseases, especially in leprosy. For leprosy, it is given in the form of powder, decoction or syrup. A syrup of the leaves was administered to two cases of chronic psoriasis. There was some improvement noticed in the patches after its administration for a few days.

37. *Lipia Nodiflora.*

Nat. Ord. Verbinaceae.

Ver.—Tam., Poduthalei ; Mal., Katu-thippali ; Tel., Bokkena.

Chutney made from the leaves and fruits of this plant is eaten to relieve the irritation of internal piles. A fumigation by the compression of the entire plant between two red hot bricks is said to give relief in inflamed and bleeding piles. The chutney and the fumigation on trial were found to give only temporary relief in such cases.

38. *Lodoicea Seychallarum.*

Nat. Ord.—Palmae.

Ver.—Tam , Kadalerangham pattai ; Mal., Kadalthenga ; Tel., Samudraputen kayee.

The fibrous husk of the nut of this palm is what is known as Kadelerangham pattai. Long before the discovery of the island of Seychelles, the entire nuts were found occasionally on the seashore of the West Coast and Ceylon and that is why the Tamil name the sea drifted cocoanut is given to it. The vaidyans consider it useful in reducing the quantity of sugar in the urine in cases of diabetes mellitus and they administer a decoction in doses of 3 ounces three times a day. This decoction was given to two patients in the hospital with diabetes mellitus The sugar eliminated decreased considerably, but did not disappear altogether. There was relapse as soon as the decoction was stopped.

39. *Melia Azadirachta.* (Azadirachta Indica).
Nim or Margosa tree.

Nat. Ord.—Meliaceae.
Ver.—Tam., Vepamaram; Mal., Vepamaram; Tel., Vepachettu.

The root bark and bark are said to possess tonic and antiperiodic properties. The leaves and nuts are said to be insecticide. The flowers are said to possess stomachic and carminative properties. A tincture of the bark of the stem was administered to cases of malarial fever as an antiperiodic and was found to be useful. A decoction of the root bark was also tried in malarial fever and was found to be equally efficacious. The margosa tree is considered by Hindu physicians to possess several important properties. Mohideen Sheriff speaks highly of the toddy or the sap, which on rare occasions flows out through small cracks or fissures in the trunk and large branches of the tree as an important therapeutic agent in long standing cases of leprosy, other skin diseases, consumption, atonic dyspepsia and general debility. I have seen the paste of the leaves used externally in cases of smallpox. The oil expressed from the seeds is a favourite remedy amongst the Indian practitioners as an external application in tetanus

40. *Nigella Sativum*—

Nat. Ord.—Ranunculaceae.
Ver.—Tam., Karun-Shiragam; Tel., Nella Jeelakkara; Mal., Karunshiragam.

The seeds are anthelmintic, carminative, emmenagogue and stomachic and also galactagogue. A decoction of the seeds is given just after delivery to stimulate the uterine contraction and to *increase the secretion of the milk.* Broiled seeds powdered and mixed with jaggery are given for the same purpose with benefit. In three mild cases of puerperal fever, the patients were cured by the latter method of treatment.

41. *Ocimum sanctum*—

Nat. Ord.—Labiateae.
Ver.—Tam. and Tel., Tulasi; Mal., Thulasi.

The juice of the leaves or decoction of the same is considered to possess diaphoretic, anti-periodic and stimulating expectorant properties. A compound decoction of Ocimum sanctum, Tinospora cordifolia and Evolvulus alsinoides, was given in cases of malarial fever with no benefit

42. *Picrorrhiza Kurroa*—

Nat. Ord.—Scrophularineae.
Ver—Tam., Katukurogani; Mal., Katukhurohani; Tel., Katukkurohini.

This drug consists of a rhizome generally of the size of a goose quill. Late Doctor Mohidheen Sheriff considered this to be a powerful bitter tonic and anti-periodic, and a slight laxative. It was administered as an anti-periodic to a large number of cases but the action was found to be slow. There is no doubt that it possesses anti-periodic properties in a mild degree.

43. *Plumbago Zeylanicum*—

Nat. Ord.—Plumbaginaceae.
Ver.—Tam., Chittira moolam; Mal., Kodiveli; Tel., Chithramoolam.

The roots of Plumbago zeylanicum and rosea are more or less vesicant and are applied in the form of a paste with rice conjee to buboes and abscesses with the object of making them burst. They enter into the composition of numerous medicines for dyspepsia as they are said to increase the digestive power and to promote appetite. The root of Plumbago rosea taken internally is said to be aborti-fascient, and the root is at times introduced into the mouth of the womb for the same purpose on account of its caustic properties. The powdered root is administered in 10 to 20 grains doses in chronic dyspepsia. It is recommended also in rheumatism and hemiplegia. A compound powder consisting chiefly of Plumbago zeylanicum, Hydrocotyle asiatica, and Acorus calamus, was administered for a considerable length of time to two cases of hemiplegia without any benefit.

44. *Podophyllium Emodi*—

Nat. Ord.—Berberideae.
Ver.

This was administered in the form of a tincture to six cases and was found to possess all the properties which the podophyllin of the British Pharmacopœia possessed. It acts as a hepatic stimulant and cholagogue purgative.

45. *Pedalium murex*—

Nat. Ord.—Pedalineae.
Ver.—Tam., Anai-nerunji; Mal., Katu-nerinjal; Tel., Yenuga-palleru.

This plant when shaken up with water renders the latter mucilaginous. It is used for the cure of gonorrhœa and dysuria. The seeds have the same property. A decoction of the leaves was given to cases of gonorrhœa and the result was not satisfactory.

46. *Ruta Augustifolia*—
Nat. Ord.—Rutaceae.
Ver.—Tam., Sadhapu, Mal., Arooada ; Tel., Sadhapa.

This plant has strong antispasmodic properties; the juice of this plant is generally prescribed on the West Coast in convulsions of children and in acute bronchitis, and pneumonia. The juice undoubtedly possesses anti-spasmodic and expectorant properties. I have found it useful in the bronchial catarrh and acute bronchitis of children.

47. *Salamisri-Salep*—

This orchid is imported from Persia, Kabul, and Northern India into this Presidency. It is probably obtained from various species of orchids. The dry tuber has a great reputation as a nervine restorative and strength giver. It is prescribed in hemiplegia and paralytic affections. This drug was administered in the form of powder in teaspoonful doses in milk twice a day to a private patient suffering from nervous debility. He derived some benefit from its use.

48. *Toddalia Aculeata*—
Nat. Ord.—Rutaceae.
Ver.—Tam., Milakaranay; Mal., Kara; Tel., Mirapa-kandra or Konda-kasindha.

The bark of the root of this plant is said to be a specific for hill and jungle fever (probably malarial fever). The entire plant is said to possess febrifuge properties. An infusion was made of the bark and prescribed for several mild cases of malarial fever in the out-patient department with very beneficial results.

49. *Trichosanthes Cucumerina*—
Nat. Ord.—Cucurbitaceae.
Ver.—Tam., Katup-pepudal; Mal., Katu-padolam; Tel., Adavi-potla.

The juice of the leaf has emetic properties.

The juice of the root is a strong gastro intestinal irritant; a decoction of the root is said to possess, anti-periodic properties. This decoction was administered in doses of one ounce three times a day to several cases of malarial fever but the result was not satisfactory.

50. *Trichosanthes palmata*—
Nat. Ord.—Cucurbitaceae.
Ver.—Tam., Shavari-pazham, korattai; Mal., Kakatonti, Tel. Avagudha pandu.

The fruit of this plant is a violent hydrogogue cathartic. The oil obtained by boiling it in gingelly or cocoanut oil, when applied to the scalp, is said to cure hemicrania and ozæna. The oil is dropped into the ear in cases of ottorrhoea. In my private practice I have found this oil useful in curing hemi-crania.

51. *Terminalia Arjuna*—
Nat. Ord.—Combretaceae.
Ver—Tam., Marudu maram ; Mal., Venmaruthu ; Tel., Tellamaddi chettu

The bark of this plant is said to be a cardiac tonic and is considered by the vaidyans to be a specific in disorders of the heart. A decoction of the bark was administered to a case of valvular disease of the heart with palpitation and pain over the region of the heart. He did not derive any benefit from its administration.

52. *Taxus Baccata*—
Nat. Ord.—Conifereae.
Ver.—Tam. and Mal., Talispatri; Tel., Thalispatri.

This is an ingredient of Ayurvedic Talisyadhi churnam (compound powder of Taxus baccata) which is given generally in pulmonary diseases. The drug is given in asthma, cough and hæmoptysis. The effect of the compound powder is given under compound drugs.

53. *Thespesia Populnea*—
Nat. Ord.—Malvaceae.
Ver.—Tam. Puvarasha Maram; Tel., Gangireni; Mal., Poovarisham, chandamaram.

The leaves of this tree are ground into a paste and applied externally in children's eczema; so also an oil prepared by boiling the ground bark in cocoanut oil is applied externally in psoriasis and scabies. The contents of the fruit which is a capsule are applied externally to ringworm. A decoction of the bark is given internally in skin diseases. The ground leaves and contents of the capsule applied externally in eczema and ringworm respectively were found to be useful. A compound oil of the bark and capsule was given in cases of urethritis and gonorrhoea with beneficial results.

54. *Tinospora cordifolia*—
Nat. Ord.—Menispermaceae.
Ver—Tam.—Amrdavalli, Sindilkodi; Mal., Chittamritam; Tel., Tippatigah.

The entire plant is regarded as a valuable alterative and tonic. It enters into the composition of a large number of prescriptions for different fevers and for chronic skin diseases. It is also used in general debility with other ingredients. Its principal use is in fevers. The hakims prepare a watery extract of the drug and some of them call the extract the Indian quinine. This extract, when pure, is white in colour and consists chiefly of starch.

In all the ayurvedic prescriptions which consist of vegetable drugs for fevers, Tinospora cordifolia is considered to be an important ingredient. No doubt it is a febrifuge of some value. I have found it efficacious for ordinary simple fevers resulting from cold or indigestion in children. For this purpose it is administered in the form of a decoction with cyperus rotundus, ginger, sandal wood, and oldenlandia-herbacea. A tincture of this drug was tried in mild cases of malaria in the out-patient department and was found to be useless in such cases. The aqueous extract above referred to is called by hakims ' Satt-gilo '. It is administered by them in chronic fevers and also in diabetes. A few years ago, I tried this extract in the low chronic fever of kala-azaar and also in diabetes. I did not find it to possess the virtues attributed to it.

Chemical composition.—Satt-gilo on analysis was found to be simple starch. The stems contain a trace of berberine.

55. *Tribulus Terrestris*—

Nat. Ord.—Zygophylleae.

Ver.—Tam.—Neringi ; Mal., Neringal ; Tel., Palleru-mullu.

The entire plant, but more particularly the fruits, are used in medicine. They possess cooling, diuretic, tonic and aphrodisiac properties and are used in dysuria, urinary disorders, calculous affections and impotency. It was given a good trial in Bright's disease with dropsy. All the patients derived much benefit by its use.

It was also used combined with bdellium in a patient suffering from gonorrhoeal rheumatism with cystitis. The patient recovered without interruption.

56. *Urginea Indica*—

Nat. Ord.—Liliaceae.

Ver.—Tam.—Nari-vangayam ; Mal., Kanthanga ; Tel. Adavi-thellagadda.

On the West Coast the bulb of this plant is rubbed and applied to the soles of the feet to relieve burning. In small doses the drug possesses stimulant, expectorant and diuretic properties. In large doses it is emetic and cathartic. In the form of a syrup it was administered as an expectorant to cases of bronchial catarrh and chronic bronchitis in the out-patient department and was found useful in those affections. The syrup was prepared from the expressed juice of the bulbs the strength being 1 in 2.

57. *Viola Odorata*—

Nat. Ord.—Violaceae.

Ver.—Tam.— ; Tel. ; Mal.

This is the Banafshah of hakims who value it as a strong febrifuge in acute and chronic fevers when given in combination with other drugs. Mohideen Sherif in his Materia Medica of Madras gives the ingredients of a compound decoction which he found useful in relieving pyrexia of obstinate and long standing cases of typhoid fever, after European medicines generally used, had failed. The same decoction was administered to a case of chronic fever without any benefit at all. In the out-patients a simple infusion of viola odorata was given to several cases of pyrexia and intermittent fevers without benefit.

58. *Vernonia Anthelmintica*—

Nat. Ord. Compositeæ.

Ver.—Tam., Kattu-shiragam ; Mal., Katu-jerakam ; Tel., Adavi-jeelakara.

The seeds of this plant are considered to possess very strong anthelmintic properties by vaidyans. They are also administered in cases of intestinal colic and dysuria. They also enter into the prescriptions for leucoderma, psoriasis and other skin affections. The powdered seeds followed by castor oil were tried for removal of round worms in ½ to 1½ drachms doses and the result as far as could be ascertained showed the seeds to possess considerable anthelmintic properties.

59. *Vernonia Cinera*—

Nat. Ord. Compositeæ.

Tam., Poovamkurundhal, Sahadevi ; Mal., Puvankuruntal ; Tel., Gharitikamini.

This plant is considered to possess strong diaphoretic properties and is generally given by vaidyans to produce perspiration in fever. By itself, it has no antiperiodic property but when combined with small dose of quinine, it appears to help the action of the latter in malarial fevers. At Cannanore, I found that one of the vaidyans there, was treating cases of malarial fever with vernonia cinera and 5 grs. of quinine made into a bolus with lime juice administered every morning. I tried this method in several cases and found it to be a useful combination.

60. *Valerian Indica or Jatamansi*—

Nat. Ord. Valerianaceae.

Ver.—Tam., Jatamansi ; Mal., Jatamamsi ; Tel., Jatamamsi.

Jatamansi or the Indian valerian is said to possess all the properties of the officinal valerian. It is said to be anti-spasmodic and useful in intestinal colic. It enters into the composition of a compound powder which is burnt and used for inhalation in bronchial affections. A tincture of it was used in the out-patient department in intestinal colic and flatulence, and found to give relief in those complaints.

61. *Woodfordia floribunda*—

Nat. Ord. Lythraceae.

Tam., Thatharipushpam ; Mal., Thatharipoo ; Tel., Dhataki, arraypuvvu.

The dried flowers of this beautiful flowering shrub are regarded as stimulant and astringent and are much used in combination with other astringent medicines in dysentery, menorrhagia and other hemorrhages In the preparation of the medicated spirituous liquors known as asava and arishta, the flowers are added to set up fermentation. The powdered flowers were given in 10 to 20 grains doses with honey in dysentery and were found to be beneficial.

62. *Zingiberis Officinalis*—

Nat .Ord. Zingeberaceae.

Tam., Inji ; Mal., Inji ; Tel., Allamu.

Dry ginger enters as an ingredient into several combinations in the Indian Pharmacopoeia. Vaidyans attribute to this drug stimulant, digestive and carminative properties. At Payyanur, in Malabar, I was told that the juice expressed from fresh ginger in gradually increasing doses was a strong diuretic in cases of general dropsy whatever the cause might be. In three cases of ascites with dropsy arising from cirrhosis of the liver of recent origin, there was, when the juice was so administered, complete subsidence of ascites and disappearance of the dropsy. The fresh juice of the drug acted as a strong diuretic. The patients passed gradually increasing quantities of urine daily. It did not prove efficacious in dropsy of chronic Bright's disease and chronic heart disease ; on the other hand such cases became worse under its use. Long-standing cases of cirrhosis with ascites did not derive the slightest benefit from its administration. I have no doubt that fresh ginger juice, when properly administered will be found beneficial in cases of early cirrhosis of the liver with ascites and dropsy of the lower limbs.

The dose and method of administration.—Fresh juice of ginger expressed from 5 tolas weight of the drug mixed with an equal quantity of sugar is to be given on the first day in the morning. This is to be increased by juice expressed from 2½ tolas weight of ginger daily until the juice from 25 tolas weight is administered. The quantity is to be diminished in the reverse order every day till it comes back to juice from 5 tolas weight. If there is still any dropsy left, another course ought to be gone through in the ascending and descending order.

Diet.—The patient should be put on milk and conjee diet. This deserves a further trial.

63. *Ophiorrhiza Mungos*—

Nat. Ord. Rubiaceae.

Ver.—Tam., Kiripundu ; Mal., Avilpori ; Tel., Surpashe chettu.

The bark of the root of this plant, I was told by a physician of the west coast possessed laxative and sedative properties. He gave the following directions for its administration.

" Take the bark of the root of this plant, grind it into a paste and make boluses of the size of the lime each. Give one of these in milk early morning for three days. This would keep maniacs quiet and move their bowels freely." The Superintendent of the Lunatic Asylum, Madras, to whom I sent this drug for trial, reported after its administration to two cases that it did not possess the properties attributed to it.

64. *Gomuthram or cow's urine*—

It is highly recommended in cases of cirrhosis of the liver and for this purpose fresh urine has to be given early morning in doses of one to two ounces. This was given to two cases of cirrhosis of the liver without benefit. Calf's urine is said to be beneficial in that fatal disease of infants known as infantile biliary cirrhosis. I tried this method of treatment in a few private cases. None of the infants derived any benefit from it.

THE FOLLOWING SINGLE DRUGS HAVE ALREADY BEEN REPORTED UPON AND INCLUDED IN THE PRELIMINARY REPORT.

1. Bombax Malabaricum.
2. Bambusa Arundinacea.
3. Holarrhena Anti-dysenterica.
4. Cleome Viscosa.
5. Aconitum Heterophyllum.
6. Adahatoda Vasica.
7. Semicarpus Anacardium.
8. Withania Somnifera.
9. Ipomea Turpethum.
10. Eclipta Prostrata
11. Butea frondosa.
12. Vanda Roxburghii.
13. Guggulu.
14. Oxalis Corniculata.
15. Silajatu.
16. Sida Cordifolia.
17. Phyllanthus Emblica.

Index of Single Drugs.

Serial number and name of the drug.

1. Alstonia Scholaris.
2. Asparagus Racemosus.
3. Anisomeles Malabaricum.
4. Anacyclus Pyrethrum (Pellitory).
5. Areca Catechu.
6. Acorus calamus.
7. Adenema Hyssopufolia (Cicendia Hyssopufolia).
8. Andrographis Paniculata.
9. Acalypha Indica.
10. Artemisia Maritima.
11. Ailanthus Malabaricum.
12. Asteracanthus Longifolia or Hygrophilla Spinosa.
13. Amoora Rohithaka.
14. Boerhavia Diffusa.
15. Berberis Aristata.
16. Brassica Campestris.
17. Clerodendron Serratum.
18. Cardiospermum Halicacabum.
19. Croton Tiglium.
20. Cassia Tora.

Serial number and name of the drug.

21. Coscinum fenestratum.
22. Calotropis gigantea and Procera.
23. Caesalpinia Bonducella
24. Cassia Auriculata.
25. Chenopodium Ambrosioides.
26. Chempullanhi (Colycopterus Floribunda).
27. Daemia Extensa.
28. Evolvulus Alsinoides.
29. Embelia Ribes.
30. Euphorbia Pilulifera.
31. Gudumal
32. Gloriosa superba.
33. Hydnocarpus inebrians.
34. Herpestis Monniera.
35. Hypoxis orchioides or Curculigo orchioides.
36. Hydrocotyle Asiatica.
37. Lipia Nodiflora.
38. Lodoicea Seychallaram.
39. Melia Azadirachta.
40. Nigella Sativum.

Serial number and name of the drug.

41. Ocimum Sanctum.
42. Picrorrhiza Kurroa.
43. Plumbago Zeylanicum.
44. Podophyllium Emodi.
45. Pedalium Murex.
46. Ruta Angustifolia.
47. Salamisri-Salep.
48. Toddalia Aculeata.
49. Trichosanthes Cucumerina.
50. Trichosanthes Palmata.
51. Terminalia Arjuna.
52. Taxus Baccata.
53. Thespesia Populnea.
54. Tinospora Cordifolia.
55. Tribulus Terrestris.
56. Urginea Indica.
57. Viola Odorata.
58. Vernonia Anthelmintica.
59. Vernonia Cinera.
60. Valerian Indica or Jatamansi.
61. Woodfordia Floribunda.
62. Zingiberis Officinalis.
63. Ophiorrhiza Mungos.
64. Gomuthram or cow's urine.

APPENDIX No. 2-B.

COMPOUND PREPARATIONS, INVESTIGATED.

Basmams.

1. *Abbrak basmam or Talc basmam (calcined* 100 *times)*—
Dose—2 to 6 grains.
Ther. use—Useful in consumption, diabetes mellitus.
The basmam that was used by me was one which was calcined 100 times and obtained from Zandu Pharmacy, Bombay. This was administered to four cases of diabetes mellitus and one case of tubercular phthisis. The latter did not derive any benefit from its use but in all the cases of diabetes mellitus, there was a gradual diminution in the quantity of sugar eliminated in the urine and the patients gained strength. Sugar did not completely disappear from the urine under its use.

2. *Coral basmam—Or Pravala basmam (Calcined coral)*—
Dose—3 to 12 grains, twice a day after meals.
Ther. use—Useful in spermatorrhoea, cough, phthisis, etc.
Pravala basmam is used by vaidyans in spermatorrhoea, cough and phthisis. It was administered to cases of chronic bronchitis and pulmonary tuberculosis. It did allay cough to a certain extent in pulmonary tuberculosis, but the patients were not otherwise benefited. In chronic bronchitis, it gave relief to a few patients.

3. *Mukta basmam—Pearl basmam or Calcined pearl*—
Dose—2 to 6 grains, twice a day with honey.
Ther. use—Useful in cough, phthisis and asthma.
This was given to cases of bronchitis and found to be beneficial.

4. *Makshika basmam (Calcined Iron-pyrites)*—
Dose.—2 to 12 grains, twice a day after meals with honey.
Ther. use.—Anæmia, chlorosis, heart affections.
This was administered to a patient with marked anæmia from ankylostomiasis after the usual thymol treatment for the expulsion of worms. This basmam was administered for several days but the improvement was so slow that it had to give place to a better drug.

5. *Raupya basmam (Calcined silver)*—
Dose.—2 to 6 grains, to be taken twice a day with honey.
Ther. use.—Useful in general debility.
This was tried in cases of general debility with negative result.

6. *Tamra basmam—(Calcined copper)*—
Dose.—2 to 6 grains, to be taken twice a day with honey.
Ther. use.—Useful in cough and asthma.
This was tried in a few cases of asthma and bronchitis and found to give relief in those cases.

7. *Annabedhi sinduram*—
Preparation.—Prepared by calcining ferrous sulphate and nitre ground in lime juice.
This is evidently a compound of the oxide of iron with a small quantity of the citrate of iron.
Dose.—1 to 3 grains, three times a day after food.
I have found this preparation to do considerable amount of good in cases of secondary anæmia. It has no constipating after effects and is well borne by patients. In my opinion it is equal if not superior to reduced iron and Blaud's pills. Another point in favour of it is that it can be prepared easily. It was administered to several cases of anæmia, result of ankylostomiasis, anæmia of chronic Brights disease, and infantile biliary-cirrhosis. It did not do any good in the last mentioned disease, but in all other cases the patients were benefited to a great extent.

Churnams.

7a. *Ashta churnam*—
Composition (vide prescription No. 7*a*).
Dose—1 to 2 drs.
Ther. use—Useful in indigestion, dyspepsia, loss of appetite.
This was given to several cases of weak digestion with loss of appetite and was found to be a good appetiser and stomachic tonic.

8. *Avipattikar churnam*—
Composition (vide prescription No. 8).
Preparation 15 grains tablet.
Dose—2 to 8 tablets.
Carminative and laxative.
Suitable in hyperacidity and indigestion.
This was given to several cases of atonic dyspepsia and mild gastritis with some benefit.

9. *Arkamoola churnam*—
Composition (vide prescription No. 9).
Vide Calotropis gigantea under single drugs.

10. *Chithrakamuladhi churnam*—
Compound powder of plumbago zeylanicum.
Composition (vide prescription No. 10).
Dose—10 to 30 grs., three times a day.
Said to be useful in epilepsy, hysteria, mania and other mental disorders.

This compound powder was administered to a young man who was badly suffering from frequent attacks of epileptic fits. It showed a slight beneficial effect by increasing the interval between the fits. U. C. Dutt says the root of plumbago zeylanicum is said to have beneficial effect on piles, but I have had no occasion to ascertain this property.

11. *Compound cough powder*—(*Compound powder of Justicia adhathoda*)—
Composition (vide prescription No. 11).
Dose—2 to 6 grs.
Ther. use—In bronchial catarrh and bronchitis.

This compound powder prepared by a hakim was administered to two cases of bronchial catarrh and was found to be unsatisfactory.

12. *Compound constipation powder* (*Pulv. Rhei Co. Unani*).
Composition (vide prescription No. 12).
Ther. use—In constipation.

This was given to 10 patients for constipation and found to have good effect.

13. *Eladi churnam* (*Pulv. Cardomomi Co.*)—
Composition (vide prescription No. 13).
Preparation—powder.
Dose—5 to 20 grs.
Ther. use—Used in general debility and bronchial affections.

This was prescribed to a few cases of acute bronchitis in the out-patient's department and the result was good.

14. *Gangadhara churnam*—(*Leghu and Brihat*)—
Composition [vide prescription No. 14 (*a*) *and* (*b*).]
Preparation—powder.
Ther. use—Astringent and intestinal tonic.
Dose—20 to 40 grs. to be taken thrice a day.

These two compound preparations were administered to several cases of acute and chronic dysentery and chronic diarrhœa and were generally found to be useful; but when they failed in cases of dysentery, emetine hydrochloride at once gave relief.

15. *Kalyanaksharam*—
Composition (vide prescription No. 15).
Preparation—A compound salt.
Dose—30 to 60 grs., twice a day with ghee.
Ther. use—Reputed to be a specific for all forms of dyspepsia.

It was administered to several cases of chronic gastritis and dilatation of the stomach. In the former, appreciable benefit to the patients was noticed and in the latter the result was negative.

16. *Lavangadhi churnam*—
Compound powder of cloves.
Composition (vide prescription No. 16).
Preparation—powder.
Dose—20 to 60 gr. to be taken three times a day.
Ther. use—When gradually dissolved in the mouth and swallowed, it relieves cough.

This was given to a few cases of bronchial catarrh for relieving cough with good effect.

17. *Musalyadhi churnam*—
(Vide No. 35—single drugs).
Composition—See prescription No. 17.

18. *Powder for Inhalation in Influenza*—
Composition (See prescription No. 18).

The inhalation twice a day of the fumes arising from a burning wick containing this powder is said to act as a prophylactic against influenza and to mitigate the severity of the symptoms of that disease. I have tried it sufficiently to remark that the powder possesses to some extent the properties attributed to it.

19. *Rohitaka churnam*—

Composition—See prescription No. 19.
Vide notes on single drugs No. 13.

20. *Swayamagni*—

Composition (vide prescription No. 20).
Dose—3 to 7 grains to be taken twice a day.
Ther. use—Useful in stomach-ache, indigestion and dyspepsia.

This compound powder is said to be a certain cure for stomach-ache, indigestion and anæmia. This was tried in five cases of dyspepsia without any benefit.

21. *Swadishta virechena*—

Composition (vide prescription No. 21).
Dose—1 to 2 grains.

Ther. use—Laxative and efficacious in piles, constipation and fissure of the anus. The powder was administered to three cases of habitual constipation and found to be useful.

22. *Saraswathi churnam*—

Composition (vide prescription No. 22).
Dose—20 to 80 grains thrice a day in milk.
Ther. use—Alterative, and Brain tonic.

Said to be useful in epilepsy, mania, hemiplegia and loss of voice. This was tried in two cases of epilepsy without any benefit.

Confections, Leghiams and Ghrithams.

23. *Amritha Bhalataki*—

Composition (vide prescription No. 23).
Ther. use—Alterative tonic in skin diseases.
Dose—20 to 90 grains.

Recommended for leprosy, scrofula and syphilitic diseases.

This was administered in scabies and psoriasis and was found to be useful when continued sufficiently long.

24. *Amritha prasaghritha*—

Composition (vide prescription No. 24).
Dose—½ to 1 oz.
Ther. use—General tonic.

Useful in consumption, emaciation and general debility.

This was given to two cases of advanced tubercular phthisis—no benefit was noticed.

25. *Abhayamaliki*—

Composition (vide prescription No. 25).
Dose—¼ to 1 tola.
Ther. use—Alterative and tonic; useful in general debility with weakness of memory.

This rasayan was found useful as a tonic in general debility after fevers.

26. *Aazairaisah*—

Composition (vide prescription No. 26).
Ther. use—Tonic for the heart and nerve.
Dose—½ to ¾ tola with milk.

This Unani halwa is extolled as a very strong tonic for the heart, brain and liver. It is said to be useful in general debility, sexual debility, and in bronchitis and asthma. This has been found to be a good tonic in general debility.

27. *Bramhi Ghritha*—

Noted under Herpestis monniera. Single drugs.
Composition—(vide prescription No. 27).

28. *Chyavanaprash*—

Composition—(vide prescription No. 28).
Dose—½ to 2 tolas.
Ther. use—Nutritive and tonic. Strengthens the body. Useful in general debility and debility of old age.

This was given to two cases of general debility with satisfactory results. Patients improved in their health, regained lost appetite and gained strength.

29. *Dasamoola Rasayanam* (*Confection of the ten roots*)—

Composition—(vide prescription No. 29).
Dose—¼ to ½ tola.
Ther. use—Useful in asthma, cough and consumption.

This was given in combination with confection of Justicia adhathoda in cases of asthma was found to be a useful adjunct to the latter in relieving the fits of asthma.

30. *Lashunadhi Ghritham*—
Composition—(vide prescription No. 30).
Dose—$\frac{3}{4}$ to 1 tola.
Ther. use—Stimulant and carminative.

This was given to a few cases of atonic dyspepsia and found to have beneficial effect on the disease.

31. *Majoonai Khuvathiaibah or manly power*—
Composition—(vide prescription No. 31).
Ther. use—Tonic for the heart and brain and useful in sexual and general debility.
Dose—$\frac{1}{2}$ tola.

This medicine was given as a tonic and was found to improve the appetite and to gradually increase vigour and strength.

32. *Kushmanda Rasayanam*—
Composition—(vide prescription No. 32).
Dose—$\frac{1}{2}$ to 1 tola.
Ther. use—Said to be useful in consumption, bronchitis, spitting of blood, general debility, etc.

This was given to two cases of pulmonary tuberculosis and the patients did not derive any benefit.

33. *Shrirag* (Confection of fruits of aegle marmelos)—
Composition—(vide prescription No. 33).
Dose—$\frac{1}{2}$ to 1 tola.
Ther. use—Useful in chronic diarrhoea, dysentery and sprue.

A case of chronic dysentery, to which it was administered, was cured.

Decoctions or Quaths.

34. *Abhaydhi quath*—
Composition—(vide prescription No. 34).
Preparation—Compound decoction.
Dose—1 to 2 ounces twice a day.
Ther. use—Alterative, bitter tonic and slightly laxative.

It was administered to cases of bronchitis with fever and constipation and it proved to be a good remedy in relieving the symptoms in such cases.

35. *Dasamoola quath*—
Composition—(vide prescription No. 35).
Decoction of the ten roots.
Dose—1 to 2 ounces taken twice a day (ingredients of this decoction enter into several other compound preparations). They are considered to be antipyretic, alterative and bitter tonic.

The decoction is extensively used in cough, cold, neuralgia, etc., remittent fever, puerperal fevers, and many other diseases supposed to have been caused by the derangement of all the humours.

This was administered to three in-patients and several out-patients for malarial fever and bronchitis and bronchial catarrh. It did not do good in malarial fever but was of some benefit in bronchial affections.

36. *Gudoochyadhi quath*—
Composition (vide prescription No. 36).
Preparation—Compound decoction.
Ther. use—Bitter tonic, stomachic and antiperiodic. Useful in anorexia, dyspepsia, dysentery and malarial fever.
Dose—1 to 2 ounces twice a day.

It was tried in several cases of malarial fever but the action was very slow and even in slight cases it required about a week to stop the fever.

Fermented infusions and decoctions.

37. *Drakshasava* (fermented juice of grapes)—
Composition—(vide prescription No. 37).
Dose—$\frac{1}{2}$ to 2 tolas to be taken twice a day after food.
Ther. use—Stimulant, tonic and diuretic.

This preparation acted as a good appetiser and tonic in a young woman who was weak and anaemic.

38. *Kutajaarishta* (Fermented decoction of Hollarhena antidysenterica)—
Composition (vide prescription No. 38).
Dose—½ to 2 tolas.
Ther. use—Astringent and antiperiodic; useful in chronic diarrhœa, dysentery and sprue.

A patient with colitis and diarrhœa was relieved by its use.

39. *Loha Asava*—
Composition (vide prescription No. 39).
Dose—½ to 2 tolas.
Ther. use—Tonic, haematinic, useful in anaemic dropsy and diseases of the spleen.

This was given to a patient with anaemia and to another patient with enlarged spleen—Both of them did not derive any benefit.

Liniments, Thailams and Ointments.

40. *Adithyapaka Thaila*—
Composition (vide prescription No. 40).

This is said to be a cure for scabies; several cases of scabies were treated among the out-patients with this ointment and were cured by its use.

41. *Aswaghandha Bala Lakshadhi Thailam*—
Compound oil of Withania somnifera, Sida cordifolia, lac, etc.
Composition (vide prescription No. 41).
Dose—3 drops to be increased daily by one drop to 10 drops.
Ther. use—In all fevers, mania, consumption, asthma, rheumatic complaints.

The oil was highly recommended to me as a specific for consumption by a physician at Nellore. I got a small supply of the oil from him and tried it in six cases of tubercular phthisis—none of the patients derived any benefit from it although directions enjoined by the physician were strictly observed.

42. *Chakra-mardha Thaila* (Compound oil of cassia tora)—
Composition (vide prescription No. 42).
Ther. use—Eczema, ringworm, and other skin diseases.

This oil was tried in some cases of ringworm with very satisfactory results.

43. *Dadrughna ointment.* Ringworm ointment)—
Composition—Chief ingredient is Rasakarpoora or perchloride of mercury (vide prescription No. 43).

Ther. use—Antiparasitic, and escharotic; useful in ringworm and in other parasitic skin diseases.

In several cases of ringworm among the out-patients, this ointment generally proved to be an efficient parasiticide.

44. *Ksheerabala oil* (101 *times boiled*)—
Composition (vide prescription No. 44).
Oil prepared from Sida cordifolia, sesamum oil and milk.
A summary of its use has been already given in my preliminary report.

This oil is the most renowned Malabar specific for internal and external use in nervous diseases such as neuralgia, hemicrania, paralysis, paraplegia, hemiplegia, facial-paralysis, sciatica, etc.

Since writing the preliminary report, the oil has been used in cases of facial paralysis, and cervical and brachial neuralgia with benefit.

45. *Compound oil of vitex negundoo*—
Composition (vide prescription No. 45).
Ther. use—For glandular swellings of the neck.

This oil was given to three cases of tubercular glands of the neck to be rubbed on the head before their daily baths. In one case the swelling of the glands went down after the oil was used for a month. The other two cases did not derive any benefit.

46. *Panchavalkaladi Thailam*—
Composition (vide prescription No. 46).
Ther. use—For external application in skin diseases caused by vitiated blood or bile, such as eczema.

This has been tried in a few cases of eczema and found to be useful.

47. *Vidanga Thaila*—
Composition—chief ingredients are Embelia ribes, Croton tiglium and carbonate of sodium (vide prescription No. 47).
Ther. use—To be applied to the forehead or dropped into the nose for relieving headache.

This was used in cases of hemicrania with negative result.

48. *Vishagarbha Thaila*—

Composition—chief ingredeints are Vitex negundoo, Eclipta alba, Datura stramonium and Aconite (prescription No. 48).

Ther. use—Useful in neuralgia, earache, paraplegia, hemiplegia, lumbago, etc.

This was tried as an external application in hemiplegia and neuralgia without benefit.

Pills.

49. *Abhaydi modak* (Compound tablets of Chebulic myrabolans)—

Composition (*vide prescription* No. 49).

Preparation—5 grains tablet.

Dose—1 tablet.

Ther. use—Cathartic.

This was given to several cases of constipation in the out-patients department with satisfactory results.

50. *Amritha Gugulu*—

Composition (vide prescription No. 50).

Preparation—6 grains pills.

Dose—1 to 4 pills three times a day.

Ther. use—Alterative, astringent and tonic.

Useful in rheumatism, boils, ulcers, etc.

This compound preparation of bdellium in the form of pills was administered to two cases of chronic rheumatism in the out-patient department; the result was not satisfactory.

51. *Chandraprabha gutika*—

Composition (vide prescription No. 51).

Preparation—6 grains pills.

Dose—1 to 4 pills three times a day.

Ther. use—Tonic, diuretic and antacid, said to be useful in albuminuria, phosphaturia and gonorrhoea.

These pills were tried in four cases of gonorrhoea amongst the out-patients with marked benefit.

52. *Dhanwantari pills*—

Composition (vide prescription No. 52).

Dose—1 to 3 pills three times a day.

Ther. use—Useful in hiccough, vomiting, fainting and also in disorders of the phlegm humour

These pills were tried in a case of hiccough without any benefit.

53. *Gokshuradhi Gugulu*—

(Pills of 6 grains each).

Composition (vide prescription No. 53).

Dose—1 to 4 pills three times a day.

Ther. use—Demulcent, diuretic and alterative; useful in albuminuria, dysuria, calculi, gonorrhoea and rheumatism.

These pills were administered to a patient with gonorrhoeal rheumatism and gleet and were found to give much relief.

(Vide notes on single drugs—Tribulus terrestris.)

54. *Mandura Loha*—

Composition (vide prescription No. 54).

Ther. use—Tonic and haematinic. Useful in asthma (between attacks), general and sexual debility, enlargement of spleen, heart disease and wherever there is poverty of blood.

Dose—1 to 4 pills of 2 grains each to be taken twice a day after food.

The action of this drug was found to be very slow and unsatisfactory in secondary anæmia.

55. *Punarnava Manduram*—

Composition (vide prescription No. 55).

Dose—1 to 4 pills to be taken twice a day after meals.

This combination is a general tonic, haematinic, and diuretic.

It is useful in anaemic dropsy, Bright's disease and general debility. This was administered in dropsy accompanied by anaemia and was found to have diuretic and blood restoring properties.

56. *Shoathahar Loha*—

Composition (vide prescription No. 56).

Dose—1 to 4 pills to be taken three times a day after food (Pills of 6 grains each).

Ther. use—Tonic, hematinic and antacid. Valuable in dropsy due to anaemia, also useful in scrofula, Bright's disease, and heart affections.

A patient with anaemic dropsy as the result of ankylostomiasis was put on these pills for a number of days but there was no improvement in his condition.

57. *Trayodashang Gugulu—*

Composition (vide prescription No. 57).

Dose—1 to 4 pills of 6 grains each.

Ther. use—Demulcent, diuretic, and anti-spasmodic; useful in incontinence of urine, cystitis, asthma, and all spasmodic affections.

This compound bdellium preparation was administered to a few cases of asthma without benefit.

58. *Yogaraja Gugulu—*

Already reported on in the preliminary report under single drugs; Guggulu—Balsamodendron Mukul.

Composition (vide prescription No. 58).

59. *Agnithundi Rasa—*

Composition (vide prescription No. 59).

Dose—1 to 4 pills of 1 grain each with milk after meals.

Ther. use—Bitter, stomachic, and tonic; useful in dyspepsia, indigestion and colic.

These pills were given in a few cases of dyspepsia and found to be useful in giving slight relief to the symptoms.

60. *Agni Rasa—*

Composition (vide prescription No. 60).

Dose—20 to 60 grains.

Ther. uses—Said to be a specific for bronchitis and useful in bronchial catarrh pneumonia and croup.

This powder was administered to cases of chronic bronchitis without any benefit.

61. *Agnisooti Rasa—*

Composition (vide prescription No. 61).

Ther. use—Gastric stimulant, useful in dyspepsia, diarrhoea and dysentery.

Dose—2 to 8 pills of 1 grain each.

These pills were given in about a dozen cases of dysentery and were found generally useful and to give relief in that disease.

62. *Arogyavardhini Pills—*

Composition (vide prescription No. 62).

Dose—1 to 4 pills three times a day with milk.

This preparation is used as an alterative in congestion of the liver, hepatitis, dyspepsia and anæmia. It is also said to be a specific for dropsy. A patient with chronic gastritis who was put on it, derived much benefit.

63. *Agnikumara Rasa—*

Composition (vide prescription No. 63).

Ther. use—Sedative, stomachic, antacid, useful in cholera, colic, diarrhœa, indigestion, tympanitis.

Dose—1 to 2 pills twice a day.

This was administered to cases of lienteric diarrhœa without any beneficial result.

64. *Brihat Chandrodaya Makardhwaja—*

Composition (vide prescription No. 64).

Ther. use—Tonic, stimulant. Said to be highly efficacious in sexual debility.

Dose—1 to 4 pills to be taken twice a day with milk.

This is a mild nervine tonic and has to be continued for five or six weeks before the good effects are seen.

This tonic was administered to a patient for general debility. He took it only for 3 days. The result could not therefore be ascertained.

65. *Devakusumadi Rasa—*

Preparation—1 grain pill.

Composition (vide prescription No. 65).

Dose—1 to 4 pills three times a day.

Ther. use—In syphilitic affections.

These pills were given to cases of secondary syphilis. The patients derived marked benefit from them.

66. *Ekangaveera Rasa—*

Composition (vide prescription No. 66).

Ther. use—Tonic, alterative, useful in hemiplegia, paraplegia, paralysis, synovitis of the knee joint, sciatica.

Dose—1 to 4 pills of 2 grains each, to be taken twice a day with rasnadi quath.

This drug was administered to a patient with hemiplegia; the result was negative on the other hand, the pills irritated the intestines and produced a certain amount of enteritis.

67. *Jatiphaladhi Gutika*—

Composition (vide prescription No. 67).
Preparation—1 grain pills.
Dose—1 to 4 pills three times a day.
Ther. use—Astringent, anodyne and diaphoretic.

This was tried in several cases of acute and chronic dysentery and diarrhoea with benefit.

68. *Jalodarara Rasa*—

Composition (vide prescription No. 68).
Preparation—1 grain pills.
Dose—1 to 3 pills with milk.
Ther. use—Cathartic.

Each pill contains 1/3 gr. of croton seed with other ingredients. It is a powerful cathartic; useful in ascites and dropsy. It was administered to a case of ascites and produced copious stools, with irritation of the bowels.

69. *Krimimudgara Rasa*—

Composition (vide prescription No. 69).
Preparation—5 grains pills.
Dose—1 to 4 pills followed by a purge.
Ther. use—Anthelmintic.

These pills were tried in cases of ankylostomum and ascaris lumbricoides but the result was disappointing.

70. *Kanakasundara Rasa*—

Composition (vide prescription No. 70).
Preparation—2 grains pills.
Dose.—1 to 3 pills three times a day.
Ther. use—Neuralgia, colic, asthma, whooping cough, sore-throat, etc.

These pills were administered to a few cases of hemi-crania and asthma. In the latter disease, they did some good, but in hemi-crania no relief was obtained.

71. *Lakshmi vilas Rasa*—

Composition (vide prescription No. 71).
Preparation—2 grains pills.
Dose—1 to 4 pills twice a day.
Ther. use—In sexual debility, mania, phthisis, asthma and general debility.

This was given to a few out cases in sexual and general debility without any benefit.

72. *Mriganka Rasa*—

Composition (vide prescription No. 72).
Preparation—1 grain pill.
Dose—1 to 4 pills with milk twice a day after food.
Ther. use—Largely used in cases of phthisis.

This was administered to a case of incipient pulmonary tuberculosis; the patient was relieved of the complaint by its use for five weeks.

73. *Maha Mrithyanjaya Loha*—

Composition (vide prescription No. 73).
Dose—1 to 4 pills of 2 grains each twice a day after meals.
Ther. use—Alterative, tonic and diaphoretic, useful in malaria with enlarged spleen.

Mild cases of malaria derived benefit from its use. In malignant cases the result was unsatisfactory.

74. *Maha Lakshmivilasa Rasa*—

Composition (vide prescription No. 74).
Preparation—1 grain pill.
Dose—1 to 4 pills three times a day with milk.
Ther. use—Tonic, alterative and haematinic.

Used in general debility and anaemia.

This was administered to a case of general debility, but no marked improvement was noticed.

75. *Maha Jvarankusa Rasa*—

Composition (vide prescription No. 75).
Ther. use—Useful to check attacks of malarial fever.
Dose—1 to 4 pills to be taken every three hours as directed by the physician.

This compound drug was found to be useful in cases of malarial fever but the action was slow.

76. *Mrithyanjaya Rasa*—

Composition (vide prescription No. 76).
Preparation—1 grain pill.
Dose—1 to 3 pills thrice a day.
Ther. use—Useful in nasal catarrh, tonsilitis, acute inflammation of air passages, erysipelas, and painful neuralgic affections.

This was tried in a few cases of influenza with broncho-pneumonia; mild cases were cured by it, but in severe cases, the rasa did not do any good.

77. *Nithyananda Rasa*—

Composition (vide prescription No. 77).
Preparation—2 grains pills.
Dose—1 to 4 pills to be taken three times a day.
Ther. use—In elephantiasis and filarial fever.

These pills were tried in 8 cases of elephantiasis and lymphangitis with periodical attacks of fever. In one case, it stopped the periodical attacks of fever but the other patients did not derive any benefit. In one case, even its prolonged use has not done any good to the patient, who is still troubled with lymphangitis and fever every third or fourth week.

78. *Naracha Rasa*—

Composition (vide prescription No. 78).
Ther. use—In obstinate constipation, ascites, cirrhosis of the liver and dropsy.
Dose—1 to 3 pills of 1 grain each.
Each pill contains one-third grain of purified croton seeds.

This is a very powerful purgative and was administered to cases of ascites. It produced such violent purgation with irritation of bowels, that further trial with it had to be given up.

79. *Narayana Jwarankusa*—

Composition (vide prescription No. 79).
Preparation—1 grain pill.
Dose—1 to 4 pills three times a day.
Ther. use—Malaria, anæmia, diabetes, psoriasis, etc.

These pills were largely used in the out-patients (59 cases) and were found to be useful in checking the attacks of malarial fever.

80. *Pancha-vakra Rasa* (in 1 grain pills)—

Composition (vide prescription No. 80).
Dose—1 to 4 pills every three hours.
Ther. use—Antipyretic, diaphoretic, anodyne. Specially useful in fevers, and all local and acute inflammations, and painful neuralgic affections.

These pills were administered to a case of painful neuralgia. The result was unfavourable.

81. *Ramban Rasa*—

Preparation—1 grain pill.
Composition (vide prescription No. 81).
Dose—1 to 4 pills three times a day after meals.
Ther. use—Tonic and anti-malarial. Malaria and chronic skin diseases, chronic rheumatism, scrofula and asthma.

This preparation was administered to cases of asthma and rheumatism and was fairly beneficial in giving relief to the patients in those diseases.

82. *Shwasakutara Rasa*—

Composition (vide prescription No. 82).
Preparation—1 grain pill.
Dose—1 to 4 pills three times a day.
Ther. use—Fevers, acute inflammations such as pneumonia, erysipelas; said to be very efficacious in asthma.

This was administered to several cases of asthma and was found useful in giving n porary relief to the patients.

83. *Sarwanga Sundara Rasa*—

Composition (vide prescription No. 83).
Preparation—2 grains pills.
Dose—1 to 4 pills.
Ther. use—Alterative and sedative; useful in phthisis, asthma and general debility.

This was tried in a few cases of tubercular phthisis and asthma, the result being negative.

84. *Smritisagara Rasa*—

Composition (vide prescription No. 84).
Dose—1 to 4 pills twice a day of 1 grain pill each.
Ther. use—In epilepsy, mania and weakness of memory.

These pills are being administered with Brahmigritha in a few cases of epilepsy to see whether they will aid the action of the latter on that disease.

85. *Shanka Rasa*—

Composition (vide prescription No. 85).
Ther. use—Sedative and stomachic, useful in indigestion, intestinal colic and flatulence.
Dose—5 to 20 grains.

This preparation was administered to some cases of gastritis and intestinal colic and found to give relief to such cases.

86. *Tribhuvan Keerthi Rasa*—

Composition (vide prescription No. 86).
Preparation—1 grain pill.
Dose—2 to 6 pills every two hours until fever subsides.
Ther. use—In high fever, acute inflammation such as pneumonia, eruptive fevers and tonsilitis.

It was administered to a few cases of influenza; in mild cases there was decided benefit but in very acute cases, the pills did not do any good.

87. *Trailokia Chinthamani Rasa*—

Composition (vide prescription No. 87).
Preparation—1 grain pill.
Dose—1 to 3 pills three times a day.
Ther. use—In general debility, cough, phthisis and sexual debility.

This was administered to two cases of tubercular phthisis without the patient deriving any benefit.

88. *Vatari Rasa*—

Preparation—2 grains pills.
Composition (vide prescription No. 88).
Dose—1 to 4 pills.
Ther. use—Paraplegia, hemiplegia, sciatica and muscular rheumatism.

It was administered to a case of lumbago and the patient was completely relieved after using the medicine for ten days.

89. *Vadvanal Rasa*—

Composition (vide prescription No. 89).
Preparation—5 grains tablets.
Dose—1 to 4 tablets three times a day.
Ther. use—Removal of hyper-acidity, indigestion and dyspepsia. It is stomachic, antacid and carminative.

A patient with chronic gastritis was put on these tablets for about a month. He was free from the complaint at the end of four weeks.

90. *Vatharakthanthaka Rasa*—

Composition (vide prescription No. 90).
Preparation—2 grains pills.
Dose—1 to 4 pills twice a day.
Ther. use—Hemiplegia, paraplegia, facial paralysis, and rheumatism.

It was given to a case of hemiplegia in an old man with considerable benefit.

91. *Vasanta Kusumakar Rasa*—

Composition—vide prescription No. 91.

Ther. use—Useful in diabetes insipidus and other urinary affections, also in sexual debility, phthisis, asthma and general weakness.

Dose—1 to 4 pills of 1 grain each, three times a day with milk.

From the nature of the composition of this rasa, it can be easily inferred that this is a powerful nerve tonic. It is used by the well-to-do in sexual and general debility. I have prescribed this medicine to several patients suffering from nervous debility and diabetes mellitus. Diabetic patients were considerably benefited by its use. I have also found it to be a satisfactory tonic for relieving general and nervous debility.

92. *Maha yogaraja Gugulu* (1 grain pill)—

Composition—vide prescription No. 92.

Dose—1 to 4 pills three times a day.

Ther. use—Alterative tonic, useful in paraplegia, hemiplegia, sciatica and other nervous affections. Aso in scrofula.

These pills were given to a case of hemiplegia for a considerable time without benefit.

93. *Chathurmuka Rasa*—

Composition—vide prescription No. 93.

Preparation—1 grain pill.

Dose—1 to 4 pills to be taken twice a day after food.

Ther. use—Said to be useful in phthisis, asthma, epilepsy and other nervous diseases.

This was administered to a case of chronic bronchitis and to one of tubercular phthisis—

Bronchitis	Cured.
Tubercular phthisis	No benefit.

94. *Mahatiktha Ghritham*—

Composition—vide prescription No. 94

Dose—½ to 2 tolas.

Ther. use—Bitter tonic, alterative; recommended in skin diseases.

This was given to a few cases of chronic skin diseases in the out-patient department and was found to be beneficial.

95. *Pranadhi Gutika*—

Composition—vide prescription No. 95.

Dose—1 to 4 pills to be taken twice a day with water.

Ther. use—Laxative, alterative; useful in dyspepsia and constipation.

These pills were tried in a few cases of atonic dyspepsia and were generally found to relieve the symptoms and to increase the appetite.

96. *Rasna Guggulu*—

Composition—vide prescription No. 96.

Dose—1 to 4 pills to be taken three times a day.

Ther. use.—Alterative and tonic. Useful in sciatica, paraplegia, hemiplegia and other nervous affections.

A hemiplegic patient who was put on these pills derived no benefit from them.

97. *Kanchanar Guggulu*—

Composition—vide prescription No. 97.

Ther. use—Alterative and tonic. Useful in scrofula, fistula, leprosy, ulcers, etc.

This was administered to a case of scrofula; the result could not be ascertained as the patient ceased attending soon after its administration.

98. *Chandrodaya No.* 1 (*Suvarna Ghatit Makhardhwaj*)—

Composition—vide prescription No. 98.

Ther. use—Useful in sexual debility and nervous diseases.

Dose—2 to 6 grains to be taken twice a day with honey, followed by milk.

This costly preparation was given to a case of locomotor ataxy for nearly five weeks. Not the slightest improvement was noticed in the patient's condition.

THE FOLLOWING COMPOUND PREPARATIONS HAVE ALREADY BEEN REPORTED ON AND INCLUDED IN THE PRELIMINARY REPORT.

1. Karpooradhi Churnam.
2. Talisyadhi Churnam.
3. Worm Powder.
4. Trivrit Churnam.
5. Anandha Bhairavi Pills.
6. Dadhumashtaka Churnam.
7. Leghu Sudarsana Churnam.
8. Brihat Sudarsana Churnam.
9. Panchathikthaka Panakam.
10. Zoofa.
11. Kutajapanithum.
12. Bhaskara Lavanam.
13. Leghu Sanka Dravkam.
14. Ithriphal.
15. Jawarish-a-kamoon.
16. Siddha Basmam.
17. Purnachandrodayam.
18. Narayana Thailam.
19. Agnithundi Pill.
20. Specific Powder.

All these compound preparations have been given further trial and I have nothing more to say about their value than what I have stated in my preliminary report.

Index of compound drugs.

Serial number and name of the drug.

1. Abbrak Basmam.
2. Coral Basmam.
3. Mukti Basmam.
4. Makshika Basmam.
5. Raupya Basmam.
6. Tamra Basmam.
7. Annabedhi Sindhuram.
7*A*. Ashta Churnam.
8. Avipattikar Churnam.
9. Arkamoola Churnam.
10. Chithrakamuladhi Churnam.
11. Compound Cough Powder.
12. Compound Constipation Powder.
13. Eladi Churnam.
14. Gangadhara Churnam.
15. Kalyanaksharam.
16. Lavangadhi Churnam.
17. Musalyadhi Churnam.
18. Powder for Inhalation in Influenza.
19. Rohitaka Churnam.
20. Swayamagni.
21. Swadishta Virechena.
22. Saraswathi Churnam.
23. Amritha Bhalataki.
24. Amritha Prasa Ghritha.
25. Abhayamalaki.
26. Aazairaisah.
27. Brahmi Ghritha.
28. Chyavanaprash.
29. Dasamoola Rasayanam.
30. Lashunadhi Ghritham.
31. Majoonai Khuvathiaibah or manly power.

Serial number and name of the drug.

32. Kushmanda Rasayanam.
33. Shrirag.
34. Abhaydhi Quath.
35. Dasamoola Quath.
36. Gudoochyadhi Quath.
37. Drakshasava.
38. Kutajaarishta.
39. Loha Asava.
40. Adithyapaka Thaila.
41. Aswaghandha Bala Lakshadhi Thailam.
42. Chakra-mardha Thaila.
43. Dadrughna Ointment.
44. Ksheerabala Oil.
45. Compound Oil of Vitex negundoo.
46. Panchavalkaladi Thailam.
47. Vidanga Thaila.
48. Vishagarbha Thaila.
49. Abhayadi Modak.
50. Amritha Gugulu.
51. Chandraprabha Gutika.
52. Dhanwantari Pills.
53. Gokshuradhi Gugulu.
54. Mandura Loha.
55. Punarnava Manduram.
56. Shoathahar Loha.
57. Trayodashang Gugulu.
58. Yogaraja Gugulu.
59. Agnithundi Rasa.
60. Agni Rasa.
61. Agnisooti Rasa.
62. Arogyavardhini Pills.
63. Agnikumara Rasa.
64. Brihat Chandrodaya Makardhwaja.
65. Devakusumadi Rasa.

Serial number and name of the drug.

66. Ekangaveera Rasa
67. Jatiphaladhi Gutika.
68. Jalodarara Rasa.
69. Krimimudgara Rasa.
70. Kanakasundara Rasa.
71. Lakshmi Vilas Rasa.
72. Mriganka Rasa.
73. Maha Mrithyanjaya Loha.
74. Maha Lakshmivilasa Rasa.
75. Maha Jwarankusa.
76. Mrithyanjaya Rasa.
77. Nithyananda Rasa
78. Naracha Rasa.
79. Narayana Jwarankusa.
80. Pancha-vakra Rasa.
81. Ramban Rasa
82. Shwasakutara Rasa.
83. Sarwanga Sundara Rasa.
84. Smritisagara Rasa.
85. Shanka Rasa.
86. Tribhuvan Keeriti Rasa
87. Trailokia Chinthamani Rasa.
88. Vatari Rasa.
89. Vadvanal Rasa.
90. Vatharakthanthaka Rasa.
91. Vasanta Kusumakar Rasa.
92. Maha Yogaraja Gugulu.
93. Chathurmuka Rasa.
94. Mahatiktha Ghritham.
95. Pranadhi Gutika.
96. Rasna Gugulu.
97. Kanchanar Gugulu.
98. Chandrodaya No. 1 (Suvarna Ghatit Makhardhwaj).

APPENDIX No. 3.

Classification of drugs based on their properties.

ASTRINGENTS.

Aconitum heterophyllum.
Aegle marmelos.
Holarrhena anti-dysenterica—Kutaja and its compound preparations as Kutajapanitham, Kutajarishta
Bombax malabaricum.
Wood-fordia floribunda.
Agnisooti Rasa (vide prescription No. 61).
Dadumasthaka Churnam (vide prescription No. 18, preliminary report)
Gangadhara Churnam (vide prescription No. 14 A & B).

ANTI-SYPHILITIC.

Specific oil for syphilis (vide prescription No. 34, preliminary report).
Poorna Chandrodayam (vide prescription No. 33, preliminary report).
Devakusumadi Rasa (vide prescription No. 65).

ANTI-DIABETICS.

Abbrak Basmam (vide prescription No. 1) Talc Calcined 100 and 1,000 times.
Lodoicea seychallarum.
Vasantha Kusumakaram (vide prescription No. 91).
Gudumal.
Cassia auriculata.
Eugenia Jambolans.
Silajit.

ANTHELMINTICS.

Butea frondosa.
Chempullanhi (Colycopteres floribunda ?)
Kirmani (Artemisia maritima).
Krimimudgara Rasa (vide prescription No. 69).
Cleome viscosa.
Chenopodium ambrosioides.
Vernonia Anthelmintica.

ALTERATIVES.

Nithyanandha Rasa (vide prescription No. 77).
Hydrocotyle Asiatica.
Amoora Rohithaka.
Calotropis Gigantea.
Celastrus Paniculata.
Gynocordia Odorata.
Pongamia Glabra.
Eclipta Prostrata.
Hemidesmus Indicus.
Mriganka Vatika (vide prescription No. 72).
Withania Somnifera.
Saraswathi Churnam (vide prescription No. 22).
Tinospora Cordifolia.
Sarwanga Sundara Rasa (vide prescription No. 83).
Trailokya Chinthamani Rasa (vide prescription No. 87).
Laxmivilasa Rasa (vide prescription No. 71).
MahaLaxmivilasa Rasa (vide prescription No. 74).

ANTI-NEURALGICS.

Maha Narayana Thailam.
Vatari Rasa (vide prescription No. 88).
Vatarakthanthaka Rasa (vide prescription No. 90).
Siddha Baala Thailam.
Kanaka Sundara Rasa (vide prescription No. 70).

ANTI-RHEUMATICS.

Confectio Semicarpus Anacardium (vide prescription No. 8, preliminary report).
Ksheerabala Oil (vide prescription No. 44)
Vatari Rasa (vide prescription No. 88).
Vatarakthanthaka Rasa (vide prescription No. 90)

Aperients.

Aarogya Vardhini (vide prescription No. 62).
Swadishta Vireohna Churnam (vide prescription No. 21).
Ithriphal (vide prescription No. 28, preliminary report).

Anti-pyretics and diaphoretics.

Sudarsana Churnam (vide prescription Nos. 19 and 23, preliminary report).
Decoction Dasamula (vide prescription No. 35).
Panchathikthaka Panakam (vide prescription No. 26, preliminary report).
Ocimum sanctum.
Picrorrhiza kurroa.
Vernonia Cinera.
Dæmia extensa.
Mrithyanjaya Rasa (vide prescription No. 76).
Maha Mrithyanjaya Loha (vide prescription No. 73).
Alstonia scholaris.
Guduchyadhi quath (vide prescription No. 36).
Viola odorata.
Coscinum fenestratum.
Berberis aristata.
Azadirachta Indica.
Aconitum ferox.

Anti-periodics (Anti-Malarial).

Ocimum sanctum.
Picrorrhiza kurroa.
Azadirachta indica.
Vernonia cinera.
Aconitum heterophyllum.
Tinospora cordifolia.
Alstonia scholaris.
Gudichyadhi quath (vide prescription No. 36).
Dæmia extensa.
Pantchathikthaka panakam (vide prescription No. 26, preliminary report).
Viola odorata.
Berberis aristata.
Coscinum fenestratum.

Tonics and Aphrodisiacs.

Lakbshmivilasa rasa (vide prescription No. 71).
Aswaghandhadi churnam (vide prescription No. 71, preliminary report).
Aazairaisah or strength giver (vide prescription No. 26).
Majoonai khwathaibah (vide prescription No. 31).
Maha lakhshimivilasa rasa (vide prescription No. 74).
Amritha-prasa (vide prescription No. 24).
Kushmanda (vide prescription No. 32).
Chyavanaprash (vide prescription No. 28.)
Brihat chandrodaya makhardhwaja (vide prescription No. 64).
Vasantha kusumakara rasa (vide prescription No. 91).

Bitter Tonics.

Melia azadirachta.
Tinospora cordifolia.
Vanda roxburghi.
Picrorrhiza kurroa.

Blood Tonics or Hæmatinics.

Terminalia arujuna.
Loha basmam, Calcined iron.
Makshika basmam, Calcined Iron Pyrites.
Shoathar Loha (vide prescription No. 56).
Mundura Loha (vide prescription No. 54).
Chathurmukha rasa (vide prescription No. 93).
Kalpam (vide prescription No. 36, preliminary report).
Kushmanda rasayanam (vide prescription No. 32).
Mriganka vatika (vide prescription No. 72).
Punarnava mandura (vide prescription No. 55).
Loha Asava (vide prescription No. 39).

CARMINATIVES.

Acorus calamus.
Agnithundi pills—(vide prescription No. 59).
Chebulic myrabolans.
Ptychotis ajowan.
Ashta churnam (vide prescription No. 7-A).
Jawarish-a-kamoon (vide prescription No. 30, preliminary report).

DIURETICS.

Bœrhavia diffusa.
Tribulus terrestris.
Sanka Dravakam Leghu—(vide prescription No. 25 preliminary report).
Urginea indica.

DEMULCENTS.

Tribulus Terrestris.

EXPECTORANTS.

Anacyclus pyrethrum.
Bambusa Arundinaceæ.
Glycyrrhiza Glabra.
Justicia Adhathoda.
Agni rasa (vide prescription No. 60).
Mriganka rasa (vide prescription No. 72).
Sarwanga Sundara Rasa (vide prescription No. 83).
Compound powder of camphor (vide prescription No. 13, preliminary report).
Calcined coral.
Sitopaladhi churnam (vide prescription No. 24, preliminary report).
Aswaghandhadhi Bala Lakshadhi Thailam (vide prescription No. 41).
Siddha Basmam (vide prescription No. 32, preliminary report).
Trailokya Chinthamani Rasa (vide prescription No. 87).
Zoofa (vide prescription No. 27, preliminary report).

NERVINE TONICS.

Calcined Iron Pyrites.
Silajit (A bituminous exudation from the rocks in hot weather).
Yogaraj Gugulu (vide prescription No. 58).
Maha yogaraj Gugulu (vide prescription No. 92).
Aswaghandhathi Churnam (vide prescription No. 1, preliminary report).
Saraswathi Churnam (vide prescription No. 22).
Brahmi Ghritham (vide prescription No. 27).
Amrithaprasa Ghritham (vide prescription No. 24).
Ksheerabala Oil (vide prescription No. 44).
Kushmanda Rasayanam (vide prescription No. 32).
Chithrakamuladhi Churnam (vide prescription No. 10).
Brassica campestris.
Lashunadhi Ghritham (vide prescription No. 30).
Abhayamalaki (vide prescription No. 25).

PURGATIVES.

Areca catechu.
Chebulic myrabolans.
Ipomea turpethum.
Ipomea turpethum and its compound powder (vide prescription No. 15, preliminary report).
Ithriphal (vide prescription No. 28, preliminary report).
Jalodarari rasa (vide prescription No. 68).
Naracha rasa (vide prescription No. 78).
Pulvis rhei co. (Unani) (vide prescription No. 12).
Abhyadhi modak (vide prescription No. 49).

PARASITICIDES (EXTERNAL).

Adhithyapaka Thailam (vide prescription No. 40).
Chakramardha Thailam (vide prescription No. 42).
Panchavalkaladi Thailam.

STOMACHIC AND DIGESTIVE TONICS.

Acorus calamus.
Chebulic myrabolans.
Ithriphal (vide prescription No. 28, preliminary report).
Jawarish-a-kamoon (vide prescription No. 30, preliminary report).
Kalpam (vide prescription No. 36, preliminary report).
Kalyanaksharam (vide prescription No. 15).
Confection-phyllanthus emblica (vide prescription No. 29).
Leghu sanka dravakam (vide prescription No. 25, preliminary report).
Ashta churnam (vide prescription No. 7-A).
Dhanwantari pills (vide prescription No. 52).
Bhashkara lavanam (vide prescription No. 24).

APPENDIX No. 4.

Summary of the notes on the medicines investigated.

Number and names of the drugs.	Where obtained.	Diseases used in.	Notes number on drugs.	Total number of cases treated.	Remarks on results.
SINGLE DRUGS.					
1. Alstonia scholaris	Local bazaar.	Intermittent fever ..	1	60	A feeble and slow anti-periodic.
2. Asparagus racemosus ..	Do.	Atonic dyspepsia	2	2	Action slow.
3. Anisomeles malabaricum ..	Do.	Fever accompanying teething in children.	3	3	Is a mild diaphoretic.
4. Anacyclus pyrethrum ..	Do.	Pulmonary tuberculosis ..	4	8	Gives temporary relief to the symptoms.
5. Areca catechu	Do.	Pulmonary tuberculosis (preliminary laxative).	5	8	Acts as a purgative.
6. Acorus calamus	Do.	Indigestion and colic ..	6	11	Useful.
7. Adenema hyssopufolia ..	Do.	Gonorrhœa	7	6	Do.
8. Andrographis paniculata ..	Do.	Malarial fevers	8	16	Beneficial after prolonged use.
9. Acalypha indica	Do.	Ringworm	9	58	Useful in mild cases.
10. Artemisia maritima	Zandu Pharmacy, Bombay.	Ascaris lumbricoides ..	10	16	Efficacious.
11. Ailanthus malabaricum ..	Local bazaar.	Dysentery	11	15	Do.
12. Astercanthus longifolia ..	Do.	Dropsy	12	2	A feeble diuretic.
13. Amoora rohitbaka	Do.	Enlargement of spleen ..	13	1	Not useful.
14. Boerhavia diffusa	Do.	Dropsy of bright's disease.	14	9	Good diuretic.
15. Berberis aristata	Do.	Malarial fevers	15	12	Very feeble antiperiodic.
16. Brassica campestris	Do.	Epilepsy	16	8	Gave relief.
17. Clerodendron serrata ..	Do.	Catarrhal bronchitis ..	17	6	No benefit.
18. Cordiospermum halicacabum.	Do.	Chronic rheumatism ..	18	1	Negative result.
19. Croton tiglium	Do.	Preliminary laxative in leprosy.	19	17	Useful laxative and purgative in cases of leprosy.
20. Cassia tora	Do.	Ringworm	20	17	Beneficial.
21. Coscinum fenestratum ..	Do.	Malarial fever	21	11	No benefit.
22. Calotropis gigantea and procera.	Do.	Do.	22	28	Useful, slow action.
23. Caesalpinia bonducella ..	Do.	Do.	23	52	Do.
24. Cassia auriculata	Do.	Diabetes mellitus	24	4	No effect.
25. Chenopodium ambrosioides (seeds).	Do.	Ankylostomiasis	25	3	Do.
26. Colycopterus floribunda ..	Malabar ..	Ascaris lumbricoides ..	26	61	Anthelmintic and laxative.
27. Daemia extensa	Local bazaar.	Malarial intermittent fever.	27	2	Not beneficial.
28. Evolvulus alsinioides ..	Do.	Fevers and indigestion ..	28	5	Do.
29. Embelia ribes	Do.	Worms	29	5	Feeble anthelmintic.
30. Euphorbia pillulifera ..	Do.	Asthma, bronchitis and urethritis.	30	6	Efficacious.
31. Gudumal	Punjab ..	Diabetes mellitus	31	1	Did temporary good.
32. Gloriosa superba	Local bazaar.	Do.	32	1	No benefit.
33. Hydnocarpus inebrians ..	Do.	Leprosy	33	20	Very beneficial in early cases and slightly so in longstanding cases.
34. Herpestis monniera ..	Do.	Neurasthenia, epilepsy and chorea.	34	8	Beneficial in neurasthenia and epilepsy not so in chorea.
35. Hypoxis orchioides	Do.	Gonorrhœa and dysmenorrhœa.	35	4	No benefit.
36. Hydrocotyle asiatica ..	Do.	Chronic psoriasis	36	2	Showed improvement.
37. Lipia nodiflora	Do.	Haemorrhoids	37	2	Relieves the symptoms.
38. Lodoicea seychellarm ..	Do.	Diabetes mellitus	38	3	Reduces frequency of micturition — temporary improvement.
39. Melia azadirachta	Do.	Malarial fevers	39	30	Efficacious if continued for weeks.
40. Nigella sativum	Do.	Puerperal fever	40	1	Useful in mild cases.
41. Ocimum sanctum	Do.	Malarial fevers	41	2	No benefit.
42. Picrorrhiza kurroa	Do.	Intermittent fever ..	42	73	Slow in action, but useful.
43. Plumbago zeylanicum ..	Do.	Hemiplegia	43	2	No benefit.
44. Podophyllum emodi ..	Do.	Constipation	44	6	Useful cholagogue.
45. Pedalium murex	Do.	Dropsy	45	4	Acts as a diuretic.
46. Ruta angustifolia	Do.	Bronchial catarrh and acute bronchitis of children.	46	..	Useful.
47. Salamisri	Do.	Nervous debility	47	1	Beneficial.
48. Toddalia aculeata	Do.	Malarial fevers	48	17	Beneficial in mild cases.
49. Trichosanthes cucumerina ..	Do.	Do.	49	4	Not useful.
50. Trichosanthes palmata ..	Do.	Hemicrania	50	2	Useful.
51. Terminalia arjuna	Do.	Disease of the heart ..	51	5	Not useful.
52. Taxus baccata	Do.	Bronchitis	52	1	Useful.

Summary of the notes on the medicines investigated—*cont.*

Number and names of the drugs.	Where obtained.	Diseases used in.	Notes number on drugs.	Total number of cases treated.	Remarks on results.
SINGLE DRUGS—*cont.*					
53. Thespesia populnea ..	Local bazaar.	Gonorrhœa and ringworm.	53	8	Useful.
54. Tinospora cordifolia	Do.	Simple fevers and malarial fevers.	54	41	Acts as a fair diaphoretic and mild antiperiodic.
55. Tribulus terrestris	Do.	Bright's disease and gonorrhœa.	55	6	Beneficial.
56. Urginea indica	Do.	Bronchial catarrh and bronchitis.	56	8	Useful.
57. Viola odorata	Do.	Intermittent fevers ..	57	17	Diaphoretic, but mild antiperiodic.
58. Vernonia anthelmintica ..	Do.	Ascaris lumbricoides ..	58	31	Mild anthelmintic.
59. Vernonia cinera	Do.	Malarial fever	59	5	Not useful.
60. Valeriana indica	Do.	Intestinal colic	60	6	Useful.
61. Woodfordia floribunda ..	Do.	Dysentery	61	7	Beneficial.
62. Zingiber officinale	Do.	Dropsy and ascites ..	62	8	Useful in early cirrhosis of the liver and ascites.
63. Ophiorrhiza mungos ..	Do.	Insanity	63	2	Not useful.
64. Gomuthram or cow's urine ..	Do.	Infantile biliary cirrhosis.	64	5	Do.
COMPOUND DRUGS.					
Basmams.					
1. Abbrak basmam calcined (100 times).	Zandu Pharmacy, Bombay.	Diabetes mellitus	1	4	Gave relief.
2. Coral basmam	Do.	Chronic bronchitis and pulmonary tuberculosis.	2	3	Do.
3. Mukti basmam	Do.	Asthma and bronchitis ..	3	7	Do.
4. Makshika basmam	Do.	Anaemia	4	1	Very slow in action.
5. Raupya basmam	Do.	General debility .. .	5	3	Not useful.
6. Tamra basmam	Do.	Asthma	6	3	Useful in relieving the symptoms.
7. Annabedhi sinduram ..	Prepared locally.	Anaemia	7	31	Beneficial.
Churnams.					
7-A. Ashta churnam	Local bazaar.	Atonic dyspepsia and indigestion.	7-A	23	Useful.
8. Avipattikarchurnam	Zandu Pharmacy, Bombay.	Do.	8	4	Do.
9. Arkamoola churnam ..	Do.	Dysentery	9	5	Do.
10. Chithrakamuladhi churnam ..	Do.	Epilepsy	10	1	Not useful.
11. Compound cough powder (by a hakim).	Local bazaar.	Bronchial affections ..	11	2	Do.
12. Compound constipation powder (by a hakim).	Do.	Constipation	12	10	Useful.
13. Eladi churnam	Zandu Pharmacy, Bombay.	Acute bronchitis	13	11	Do.
14. Gangadhara churnam ..	Do.	Dysentery (acute and chronic) and chronic diarrhoea.	14	61	Do.
15. Kalyanaksharam	Arya-Vydyasala, Kotakal	Dyspepsia and dilatation of stomach.	15	8	In dyspepsia beneficial; in dilatation of stomach not useful.
16. Lavangadhi churnam ..	Zandu Pharmacy, Bombay.	Bronchial catarrh	16	8	Useful.
17. Musalyadhi churnam ..	Do.	Menstrual disorders ..	17	4	Not known.
18. Prophylactic powder for influenza.	Do.	Influenza	18	Several.	Slightly beneficial.
19. Rohitaka churnam	Do.	Enlarged spleen	19	1	Not beneficial.
20. Swayamagni	Do.	Dyspepsia	20	5	Do.
21. Swadishta virechana.. ..	Do.	Habitual constipation ..	21	3	Useful.
22. Saraswathi churnam ..	Do.	Epilepsy	22	2	Not much beneficial.
Confections, Leghyams and Ghrithams.					
23. Amritha bhallataki	Zandu Pharmacy, Bombay.	Skin diseases	23	4	Useful.
24. Amritha prasa ghritha ..	Arya-Vydyasala, Kotakal.	Pulmonary tuberculosis ..	24	2	Not beneficial.
25. Abhayamalaki	Zandu Pharmacy, Bombay.	General debility	25	3	Useful.

Summary of the notes on the medicines investigated—*cont.*

Number and names of the drugs.	Where obtained.	Diseases used in	Notes number on drugs.	Total number of cases treated.	Remarks on results.
COMPOUND DRUGS—*cont.*					
Confections, Leghyams and Ghirithams—cont.					
26. Aazairaisah	Local bazaar.	General debility	26	3	Useful.
27. Brahmi ghritham	Zandu Pharmacy, Bombay.	Epilepsy	27	8	Do.
28. Chayavanaprash	Do.	General debility	28	2	Do.
29. Dasamoola rasayanam ..	Arya-Vydyasala, Kotakal.	Asthma	29	4	Do.
30. Lasunadhi ghritha	Zandu Pharmacy, Bombay.	Atonic dyspepsia	30	6	Do.
31. Majoonai-khuvathiaibah ..	Local bazaar.	Sexual and general debility.	31	4	Do.
32. Kushmandha rasayanam ..	Arya-Vydyasala, Kotakal.	General debility	32	2	Do.
33. Shrirag..	Zandu Pharmacy, Bombay.	Chronic dysentery ..	33	4	Beneficial.
Decoctions.					
34. Abhayadhi	Zandu Pharmacy, Bombay.	Bronchitis	34	19	Useful.
35. Dasamoola	Do.	Malarial fevers and bronchial affections.	35	31	Not useful in malarial fever; beneficial in bronchial affections.
36. Gudichyadhi	Do.	Malarial fevers	36	59	Useful, very slow action.
Fermented infusions and decoctions.					
37. Draksha asava	Zandu Pharmacy, Bombay.	Atonic dyspepsia and anorexia.	37	1	Beneficial.
38. Kutaja arishta	Do.	Diarrhœa	38	1	Useful.
39. Loha asava	Do.	Anæmia	39	2	A feeble haematinic.
Liniments, Thailams and Ointments.					
40. Adithyapaka thaila	Zandu Pharmacy, Bombay.	Scabies	40	26	Very useful.
41. Aswaghandha Bala Lakshdi thaila.	Prepared locally.	Pulmonary tuberculosis ..	41	6	Not beneficial.
42. Chakramardha thailam ..	Zandu Pharmacy, Bombay.	Ringworm	42	17	Beneficial in mild cases.
43. Dadrughna ointment ..	Do.	Do.	43	15	Do.
44. Ksheerabala oil, boiled 101 times.	Arya-Vydyasala, Kotakkal.	Facial paralysis and cervical and brachial neuralgia.	44	5	Beneficial.
45. Compound oil of vitex negundoo.	Prepared locally.	Chronic nasal and throat affections.	45	3	Benefit doubtful.
46. Panchavalkaladi thailam ..	Arya-Vydyasala, Kotakkal.	In skin diseases as eczema, itch, etc.	46	9	Useful.
47. Vidanga thailam	Zandu Pharmacy, Bombay.	Hemicrania	47	4	Not useful.
48. Vishagharbha thailam ..	Do.	Hemiplegia and neuralgia.	48	7	Not beneficial.
Pills and tablets.					
49. Abbhayadhi modak	Zandu Pharmacy, Bombay.	Constipation	49	84	Beneficial.
50. Amritha guggulu	Do.	Chronic rheumatism ..	50	2	Not beneficial.
51. Chandraphabha gutika ..	Do.	Gonorrhœa	51	8	Very useful.
52. Dhanwantari pills	Arya, Vydyasala, Kotakal.	Dyspepsia	52	1	Not beneficial.
53. Gokshuradhi guguln .	Zandu Pharmacy, Bombay.	Gonorrhœal rheumatism.	53	1	Beneficial.
54. Mandura loha	Do.	Anæmia	54	2	Useful
55. Punarnava mandura ..	Do.	Dropsy of Bright's disease.	55	8	Do.
56. Shoathahara loha	Do.	Anæmia	56	1	Not beneficial.
57. Trayodashang gugulu ..	Do.	Asthma	57	7	Useful.
58. Yogaraj gugulu	Do.	Hemiplegia	58	4	Not beneficial.

Summary of the notes on the medicines investigated—*cont.*

umber and names of the drugs.	Where obtained.	Diseases used in.	Notes number on drugs.	Total number of cases treated.	Remarks on results.
Rasas.					
59. Agnithundi rasa	Zandu Pharmacy, Bombay.	Dyspepsia	59	8	Slightly beneficial.
60. Agni rasa	Do.	Chronic bronchitis ..	60	6	Not beneficial.
61. Agnisoot rasa	Do.	Acute and chronic dysentery and diarrhœa.	61	16	Useful.
62. Aarogya vardhani	Do.	Dyspepsia	62	14	Do.
63. Agnikummara rasa	Do.	Diarrhœa	63	5	Do.
64. Brihat Chandrodaya Makardhwaj.	Do.	General debility	64	1	Slow in action.
65. Devakusbumadi rasa ..	Do.	Constitutional syphilis ..	65	6	Useful.
66. Ekangavera rasa	Do.	Hemiplègia	66	1	Not useful.
67. Jatiphaladhi gutika	Do.	Dysentery (acute and chronic.	67	12	Useful.
68. Jalodarari rasa	Do.	Ascites and dropsy ..	68	62	Very violent cathartic.
69. Krimimudgara rasa	Do.	Ascaris lumbricoides ..	69	8	Not useful in hook-worm acted as a mild anthelmintic in round worm.
70. Kanaka sundara rasa ..	Do.	Asthma and hemicrania ..	70	7	Gave relief.
71. Laxmivilasa rasa	Do.	Sexual and general debility.	71	2	No benefit.
72. Mriganka vatika	Do.	Pulmonary tuberculosis ..	72	1	Beneficial.
73. Maha Mrithyanjaya loha ..	Do.	Malarial fevers	73	12	Useful.
74. Maha Laxmivilasa rasa ..	Do.	General debility	74	1	No marked benefit.
75. Maha Jwarankusa rasa ..	Do.	Malarial fevers	75	41	Useful.
76. Mrithyunjaya rasa	Do.	Influenza	76	7	Useful in mild cases.
77. Nithyanandha rasa	Do.	Lymphangitis	77	7	Gave relief to a few cases.
78. Naracha rasa	Do.	Ascites	78	18	Acted as a purgative.
79. Narayana Jwarankusa ..	Do.	Malarial fevers	79	69	Useful.
80. Panchavakra rasa	Do.	Cephalalgia	80	1	Gave relief.
81. Ramban rasa	Do.	Asthma and chronic rheumatism.	81	12	Beneficial.
82. Shwasakutara rasa	Do.	Asthma	82	16	Gave relief.
83. Sarwanga sundara rasa ..	Do.	Asthma and pulmonary tuberculosis.	83	6	No benefit.
84. Smriti sagara rasa	Do.	Epilepsy	84	4	Results awaited.
85. Shankha vati	Do.	Gastritis and intestinal colic.	85	4	Gave relief.
86. Trilhuvana keerti rasa ..	Do.	Influenza	86	8	Useful in mild cases.
87. Trailokya chintamani ..	Do.	Pulmonary tuberculosis ..	87	2	No benefit.
88. Vatari rasa	Do.	Lumbago	88	1	Useful in mild cases.
89. Vadavanal rasa	Do.	Chronic gastritis	89	1	Cured.
90. Vatarakthanthaka rasa ..	Do.	Hemiplegia	90	1	Showed a slight improvement.
91. Vasantha kusumakara ..	Do.	Sexual debility and phthisis.	91	1	Beneficial.
92. Yogaraja guguloo (Maha) ..	Do.	Hemiplegia	92	1	Not useful.
93. Chathurmuka rasa	Do.	Chronic bronchitis and tubercular phthisis.	93	2	Beneficial in chronic bronchitis, not useful in tubercular phthisis.
94. Mahatiktha ghritham ..	Do.	Chronic skin diseases ..	94	5	Beneficial.
95. Pranadhi gutika	Do.	Atonic dyspepsia	95	6	Useful.
96. Rasna gugulu	Do.	Hemiplegia	96	1	No benefit.
97. Kanchanar gugulu ..	Do.	Scrofula	97	1	Unknown.
98. Chandrodaya No. 1 (Suvarna ghatit makhardhwaj).	Do.	Locomotar ataxy	98	1	No improvement at all.

APPENDIX No. 5.

List of compound preparations collected and investigated with their composition.

BHASMAS.

1. *Abhrak bhasmam*—Calcined 100 times—
Dose—2 to 6 grains to be taken twice with honey.
Ther. use—Useful in phthisis, and debility of old age; gives strength to the body.

2. *Coral bhasmam*—
Dose—3 to 12 grains to be taken twice a day after food.
Ther. use—Useful in spermatorrhœa, cough, phthisis, etc.

3. *Mukta bhasmam*—
Dose—2 to 6 grains to be taken twice a day with honey.
Ther. use—Useful in general debility, cough, phthisis and asthma.

4. *Makshika bhasmam*—(Calcined iron pyrites).
Dose—2 to 12 grains to be taken twice a day with honey after meals.
Ther. use—Useful in anæmia, chlorosis, heart affections, scrofula and general debility.

5. *Raupya bhasmam*—
Dose—2 to 6 grains to be taken twice a day with ghee or honey.
Ther. use—Useful in general debility.

6. *Tamra bhasmam*—
Dose—1 to 2 grains to be taken twice a day with honey or ghee.
Ther. use—Useful in cough and asthma.

7. *Annabedhi Sinduram*—
Dose—1 to 2 grains to be taken twice a day with honey.
Ther. use—Hæmatinic; useful in anæmia.

CHURNAMS.

7. (*a*) *Ashta churnam*—

			Palam.
Thrikadugu.	Black pepper	Piper nigrum	1
	Dry ginger	Zingiber officinale	1
	Long pepper	Piper longum	1
	Omum	Ptychotis ajowan	1
	Saindhava salt	Rock salt (variety)	1
	Cumin seeds	Cuminum cyminum	1
	Karin jeerakum	Nigella sativum	1
	Assafœtida	Assafoetida	1

Powder—Dose 20 to 40 grains twice or thrice a day, before meals.
Ther. use—In dyspepsia with Baskaralavanam.

8. *Avipattikara churnam*—
The three acrids.
The three myrobolans.
The tubers of Cyperus rotundus.
Vit salt.
Embelia ribes.
Cardamomom seeds.
The leaves of cinnamomum tamala.

Take one part of the powder of each and to it add the powder of cloves equal to the united measure of the foregoing drugs, as also the powder of Convolvulus Turpethum, forty-four parts and sugar 66 parts.
Mix all these together.
Dose—20 to 40 grains to be taken three times a day before meals.
Ther. use—Purgative and carminative; useful in indigestion and constipation.

9. *Arkamoola churnam*—
Powdered bark of the root of Calotropis gigantea.
Dose—3 to 10 grains in dysentery. Thirty to 60 grains as an emetic.
Ther. use—Intestinal tonic, emetic; may be substituted for Ipecac.

10. *Chithrakamuladhi churnam*—
Chief ingredients are—
Chithraka .. Plumbago zeylanicum.
Brahmi .. Herpestis monniera.
Vacha .. Acorus calamus.
Dose—10 to 30 grains to be taken three times a day before meals.
Ther. use—Alterative, stimulant, and tonic; useful in epilepsy, mania and hysteria.

11. *Compound powder of Justicia Adhatoda* (*Unani*)—

Black pepper ..	Piper nigrum	One tola each.
Ajwan ..	Ptychotis ajowan	
Tippali ..	Piper longum	
Rock salt ..	Sodium chloride	
Nammakai salt ..	Black salt	
Borax ..		
Adathoda leaves.	Leaves of justicia adhathoda ..	40 tolas.

Put all the abovementioned ingredients in a small pot in the burning fire for some time so that the ingredients may be completely burnt.

Dose—2 to 6 grains mixed with honey.

Ther. use—In bronchial catarrh and bronchitis.

12. *Compound constipation. Pulv Rhei Co.* (*Unani*)—
(Compound powder of Senna, Rhei, Silajit basmams, etc.)—

		Tolas.
Zeera ..	Cuminum cyminum	1
Revelchinni ..	Rhei redix	1
Ilachi ..	Elettaria cardomomum	1
Amela ..	Emblic myrabolans	2
Shora ..	Potassi nitras	1½
Senna leaves ..	Senna indica	15
Sugar ..	Saccharam alba	6
Silajit Basmam ..	Bituminous exudation from rocks	3

Take some silajit in a ghadi and pour some lime juice in it and then close its mouth. After having done so, it is burnt in 50 cow dung cakes and made into bhasmam. Take 3 tolas of bhasmam and mix with the powder of all the things noted above.

Dose—¼ to ½ tola should be taken with cow's milk at bed time.

Ther. use—In constipation and also for gonorrhoea and burning sensation in urine.

13. *Eladi churnam*—
The ingredients of Eladi churnam are—

Fruits of Elettaria cardamomum	1 part
The bark of Cinnamomum zeylanicum	2 parts
The flowers of Mesua ferrea	3 ,,
Black pepper	4 ,,
Fried borax	5 ,,
Piper longum	6 ,,

and sugar equal to their united measure, that is 21 parts.

Mix all these together.

Dose—5 to 20 grains to be taken three times a day.

Ther. use—Nutritive, tonic and demulcent, useful in bronchial affections.

14. (*a*) *Leghu Gangadhara churnam*—

Thungamusthelu ..	Cyperus rotundus.
Kodisavithulu	Seeds of Holarrhena antidysenterica.
Tender fruits of maredu ..	Aegle marmelos.
Bark of lodhra ..	Simplocos racemosa.
Buruga banka ..	Gum of Bombax malabaricum.
Araypuvu ..	Flowers of Woodfordia floribunda.

All in equal parts—powder and mix.

Dose—20 to 40 grains to be taken three times a day with whey.

Ther. use—Astringent and tonic, useful in chronic diarrhœa, gives tone to the intestines and increases digestive power.

(*b*) *Vridha Gangadhara churnam*—

Thungamusthelu ..	Cyperus rotundus.
Ranukam ..	Bark of Bignonia indica.
Ginger ..	Zingiber officinale..
Araypuvu ..	Woodfordia floribunda.
Bark of Lodhra .	Simplocos racemosa.
Vettiveru ..	Andropogon muricatus.
Tender fruits of maredu.	Aegle marmelos.
Buruga Banka.	Bombax malabaricum.
Agarusonti.	Cissampelos Hernandifolia.
Kodisavithulu.	Seeds of Holarrhena antidysenterica.
Mamidipappu.	Kernel of seeds of mangofera Indica.
Athivasa.	Aconitum Heterophyllum.
Anthara Thamara.	Nymphæ shellata.

All in equal parts—powder and mix.

Dose—20 to 40 grains to be taken three times a day with whey.

Ther. use—Astringent and tonic; useful in chronic diarrhœa.

15. *Kalyanaksharam* --

Composition :—

Thrikadugu.	Piper Nigrum, Zingiber officinale and Piper longum.
Induppu.	Saindhava salt.
Vidaippu.	Vit salt
Karuthuppu.	Black salt.
Thriphala.	The three myrabolans.
Dhanthi.	Baliospermum Montanum.
Marking nut.	Semicarpus Anacardium.
Chitramulam.	Root of Plumbago zeylanicum.
Sneyham	Oleum Recini.
Gomuthram.	Cow's urine.
Surpi.	Ghee.
For making Ksharam.	

Take equal parts, grind in cow's urine, place the paste in a new pot, cover with a chatty, and close with—cloth dipped in clay ; then heat it.

Dose—½ to 1 drachum three times a day in ghee or castor oil before meals.

Ther. use—Constipation, piles, colic, gastric troubles, as cites, anæmia, worms, asthma, etc.

16. *Lavangadi churnam*—

Cloves.	Eugenia carryophyllata.
Dry Ginger.	Zingiberis officinale.
Black pepper.	Piper nigrum.
Fried borax.	

Take equal measures of these, and macerate them in the decoction of Achyranthes aspera and the roots of Plumbago zeylanica.

Form pills of 5 grains, each.

Dose —1 to 4 pills to be taken three times a day.

Ther. use—Demulcent ; useful in bronchitis.

17. *Musalyadi churna*—

Chief ingredients are—

Moosali.	Hypoxis orchioides.
Gokshuraka.	Tribulus terrestris.
Shalmali.	Bombax malabaricum.
Vanari.	Mucuna pruriens.
Gudoochi-satva.	Tinospora cordifolia.

Dose—20 to 60 grains to be taken twice a day with milk.

Ther. use—Tonic, Nutritive, alterative and aphrodisiac, Useful in leucorrhœa, menstrual derangements due to general debility.

18. *Inhalation powder for influenza*—

Davadarum.	Cedrus deodara.
Nerinjal.	Tribulus terrestris.
Vasambu.	Acorus calamus.
Koshtam.	Aplotaxis auriculata.
Gugulu.	Bdellium.
Agallachandanam.	Aquillaria agallocha.
Parithi kottai.	Cotton seeds.
Kuruva pattai.	Cinnamomum Zeylanicomum
Manji.	Nardostachys Jatamansi.
Kayam.	Assafœtida.
Manjal.	Curcuma longa.
Molagu.	Piper nigrum.
Mylpeely.	Peacock's feather with quills.
Sambrani.	Benzoin.
Veppa leaves.	Melia azadirachta (leaves of)
Mulli leaves.	Leaves of Solanum Indicum.
Yerukam leaves.	Calotropis gigantea (leaves of).
Kadukkai tholi.	Chebulic myrabolans (rind).
Kadukai leaves.	Do. (leaves of).
Nanmukha pullu.	Oil of lemon grass (Variety).

One palam of each to be sun dried—and pounded into powder, make wicks by rolling the powder in cloth, dip the wicks in ghee, light and inhale the vapour through a paper cone twice a day 6 times through each nostril.

Ther use—Inhalation for Influenza.

19. *Rohitak Churnam*—

Dose—20 to 60 grains to be taken three times a day with water.

Ther. use—Alterative, astringent and tonic. Useful in hepatitis and enlargement of spleen.

20. *Swayamagni*—

Chief ingredients are :—

Mercury	1 part.
Sulphur	2 parts.
Sulphide of mercury	3 „
Iron powder	18 „

Rub in the juice of Aloes Indica, expose it to the sun's heat for 3 days, after rubbing the mass each day in the juice; exposure to be done in an iron vessel.

Dose—3 to 7 grains to be taken twice a day.

Ther. use—Useful in stomach-ache, indigestion and dyspepsia.

21. *Swadishta virechan churnam*—

Chief ingredients are :—

Yasthimadhu.	Glycyrrhiza Glabra.
Shatapushpi.	Foeniculum, Vulgarae.
Markandi.	Senna Indica.
Gandhaka.	Sulphur sublimed.
Sugar.	Saccharum.

Dose.—60 to 120 grains to be taken at bed times.

Ther. use.—Purgative and demulcent, useful in piles, constipation.

22. *Saraswathi churnam*—

Aplotaxis auriculata.	The seeds of nigella sativum.
Physali flexuosa.	The three acrids.
Saindhava salt.	Cissampelos hernandifolia.
Ptychotis ajowan.	Pladera decussata (Clitorea ternatea).
Cumin seeds.	

Take equal measures of these and add the pulv of acorus calamus, equal to their united measure—macerate all these thrice in the juice of the Herpestris monniera and reduce to powder.

Dose—20 to 60 grains to be taken three times a day.

Ther. use—Useful in insanity, enhances the understanding, intelligence and memory; useful in hemiplegia, epilepsy, paralysis, and hoarseness of voice.

Confections, Leghyams and Ghrithams.

23. *Amritha Bhallataki*—

Take ripe marking nuts divided into halves, eight seers, boil them in thirty-two seers of water till the latter is reduced to one-fourth and strain. Again boil the nuts in sixteen seers of milk with the addition of four seers of clarified butter, till reduced to a thick consistency Then add sugar two seers and set aside for seven days when the preparation will be ready for use.

Dose.—$\frac{1}{4}$ to 1 tola to be taken twice a day with milk.

Ther. use—Alterative, stimulant and nervine tonic. Useful in leprosy, scrofula and venereal diseases.

24. *Amritha Prasa Ghritha*—

Ghee	4 seers.
Saffron	4 tolas.
The decoction of $12\frac{1}{2}$ seers of goat's flesh boiled in 64 seers of water down to	16 seers.
The decoction of $12\frac{1}{2}$ seers of physalis flexuosa boiled in 64 seers of water down to	16 „
Goat's milk	16 „

The paste of the roots of :—

Sida cordifolia.	The tubers of scirpus kysoor.
Wheat.	The three acrids.
Physalis flexuosa (Withania somnifera).	Coriander-seeds.
Tinospora cordifolia.	The sprouts of palmyra seeds.
Tribulus languinosus,	The three myrabolans.

Musk.
The seeds of Mucuna pruriens.
Meda (or Physalis flexuosa) (Withania Sommifera) ?
Mahameda (or Ichnocarpus frutescens) (or Hemidesmus Indicus) ?
Aplotaxis auriculata.
Jivaka (or Tinospora cordifolia).
Curcuma zerumbet
Berberis asiatica.
Aglaia Roxburghiana.

Rubia Manjista.
Tabernæ montana coronaria.
Pinus Webbiana.
Cardomom seeds.
The bark of Cinnamomum tamala.
The fruits of ficus glomerata.
Two tolas of each of the above.

Boil all these together and strain the liquid portion out and dissolve 1 seer of sugar in it.

Dose—$\frac{1}{2}$ to 1 tola to be taken with hot milk.

Ther. use—General tonic, useful in phthisis, weakness, emaciation. It increases strength and enhances semen and sexual power.

25. *Abhayamalaki*—

Chief ingredients are:—

Haritaki.	Chebulic Myrabolans.
Amalaka	Emblic myrabolans.
Brahmi.	Herpestis monniera.
Shankhapushpi.	Clitorea Ternatea.
Vidanga.	Embelia ribes.
Chandana.	Santalum alba.
Agaru.	Aquilaria Agallocha.
Vacha.	Acorus calamus.
Dashamoola.	The ten roots.

Dose—$\frac{1}{4}$ to 1 tola to be taken in the morning with milk.

Ther. use—Useful in debility of old age and general debility.

26. *Aazairaisah*—

(Compound confection of Bamboo Manna, rhei, etc).

1. Tabasheer.	Silicious concretions of Bambusa arundinacea.	$\frac{1}{4}$ tola each.
2. Musthaki.	Cyperus rotundus	$\frac{1}{4}$,,
3. Zafaram.	Sasafaras Indica	$\frac{1}{4}$,,
4. Jatamasi.	Valeriana Indica	$\frac{1}{4}$,,
5. Amela.	Emblic myrabolans	$\frac{1}{4}$,,
6. Pearls rubbed in rose water.		$\frac{1}{4}$,,
7. Kharoba.	Amber	$\frac{1}{4}$,,
8. Yakhudai mahlool.	Powdered ruby	$\frac{1}{4}$,,
8a. Busad mahlool.	Powdered red stone (Ochre) ..	$\frac{1}{4}$,,
9. Yeshub mahlool.	Powdered green stone	$\frac{1}{4}$,,
10. Posthai thrinj.	Citron dry	$\frac{1}{4}$,,
11. Bahmanai saphed.	Centaurea behen	$\frac{1}{8}$,,
12. Raval chini.	Rhei radix	$\frac{1}{8}$,,
13. Asarun.	Valeriana hardwicki	$\frac{1}{8}$,,
14. Nagarmotha.	Cyperus pertenuis	$\frac{1}{8}$,,
15. Agur.	Aquilaria Agallocha	$\frac{1}{8}$,,
16. Sandalka boora.	Powdered sandal wood ..	..
17. Lavangapathri.	Leaves of cinnamomum Zeylanicum.	$\frac{1}{8}$,,
18. Badarangai boye.	Mellisa officinale	$\frac{1}{8}$,,
19. Darunaj-i-akarbi.	Doronicum Pardalianches ..	$\frac{1}{8}$,,
20. Ilatchi.	Elettaria cardomomum ..	$\frac{1}{8}$,,
21. Zarishk.	Small dried grapes	$\frac{1}{8}$,,
22. Umber.	A resinous concretion from fish 1/16.	
23. Honey.	Mel	$\frac{1}{2}$ seer.—
24. Sugar.	Saccharam	$\frac{1}{2}$,,
25. Warkhai Roopa.	Silver leaves	30.
26. Warkhai sohna.	Gold leaves	30.
27. Ubarasham (thinly cut with scissors).	Silk cocoon	$\frac{1}{4}$ tola.

All these except Nos. 3, 6, 7, 8, 9, 21, 25, and 26 must be powdered and sieved. Nos. 6 7, 8 and 9, must be made into a paste by grinding in rose water, and then made into little balls and dried. These balls are powdered and mixed with the powders already prepared. No. 21 is soaked in water and its strained infusion is added to No. 23 honey. The mixture is boiled to the consistence of treacle. No. 3 saffron is soaked in rose water and No. 24—sugar is dissolved in that water. This is boiled to syrupy consistence. The prepared honey and syrup are now mixed; the powder is added to this mixture of honey and syrup, and the whole turned into halwa or confection. Silver and gold leaves are put into the halwa and thoroughly mixed by stirring.

Dose—One anna weight of this halwa is given twice or thrice a day.

Ther. use—Strength giver of the body, restores lost vigour; useful in debility, indigestion, cough, asthma and fainting.

27. *Brahmi Ghritham*—

Take of old clarified butter.	4 seers.
Fresh juice of Brahmi.	Herpestis monniera ,,
Vacha.	Acorus calamus.
Pachak root.	Aplotaxis Auriculata.
Sankhapushpi.	Clitorea ternatea.

Equal parts, in all thirty-two tolas, in the form of a paste and boil them together, till the watery portion is evaporated.

Dose—¼ to 1 tola to be taken twice a day with milk.

Ther. use—In epilepsy, aphonia and hoarseness of voice.

28. *Chyavanaprasa*—

Aegle marmelos.	Tinospora cordifolia.
Premna serratifolia.	Riddhi (Not being obtainable, Bala or sida cordifolia is used).
Bignonia Indica.	Jivak (Not being obtainable, tinospora cordifolia).
Gmelina arborea.	Rishabhaka (Bhumi kushmanda is used).
Bignonia suaveolens.	Curcuma zerumbet.
The roots of Sida cordifolia.	The tubers of Cyperus rotundus.
Hedysarum Gangeticum.	Boerhaavia diffusa.
Uraria Lagopoides.	Meda (Withania somnifera).
Phaseolus trilobus.	Elettaria cardamomum.
Piper longum.	Nymphæ stellata.
Tribulus languinosus.	Red sandal wood.
Solanum zanthocarpum.	Convolvulus paniculatus
Rhus succedanea.	The roots of justicia adhatoda.
Phyllanthus Niruri.	The root called kakoli.
Grapes.	Leea hirta.
Aplotoxis auriculata.	
Aquilaria Agallocha.	
Chebulic myrobolans.	

Take one palam of each of these. Take also 500 fruits of Phyllanthus Emblica and tie them loosely in a piece of cloth. Boil all these together in 64 seers of water down to 16 seers and strain the decoction. Throw out the seeds of the myrobalans and taking the remnants of the fruits, fry them in 6 palas of ghee and 6 palas of sesamum oil mixed together. The fried product is then to be reduced to a paste on a curry stone. After this, boil the decoction and this paste, with 50 palas of sugar candy. When the boiled matter assumes some degree of consistency, throw into it bamboo manna 4 palas, the pulv of Piper longum 2 palas, that of the bark of Cinnamomum zeylanicum 2 tolas, that of the leaves of Cinnamomum tamala 2 tolas, that of cardamoms 2 tolas, and that of the flowers of Mesua ferrea 2 tolas, and stir the contents. When cooled, add 6 palas of ghee and keep the compound in a jar long in use for storing ghee. (From N. N. Sen's Ayurvedic system of medicine).

Dose—½ to 2 tolas, vehicle being goat's milk.

Ther. use—Nutritive, tonic, useful in phthisis, and improves all conditions of debility.

29. *Dasamoola Rasayanam*—

	Seers.
Take decoction of dasamoola	8
Meat juice (prepared from the flesh of fowl)	8
The paste of Siphonanthus Indica	1

Cook all these together according to the routine method with four seers of ghee.

Dose—½ to 1 tola to be taken three times a day.

Ther. use—In asthma, and bronchitis.

30. *Lasunadhi Ghritha*—

Chief ingredients are—

Dasamoola.	The ten roots.
Lashuna.	Allium sativum.
Trikatu	The three acrids.
Haritaki.	Chebulic myrabolans.

Dose—¼ to 1 tola, to be taken three times a day.

Ther. use—Stimulant, carminative. Helps digestion, and promotes the flow of menses. Specially suitable in mania and amenorrhœa, hysteria, etc.

31. *Majoonai Khuvâthiaibah*—

		Tolas.
Nutmeg or Japhul	Myristica fragrans	2
Cloves	Eugenia caryophyllum	2
Best sambrani	Boswellia serrata	2
Pankijud	Root of betel leaves	2
Kabab chini	Cubeba officinalis	2
Ginger dry	Zingiber officinale	2
Cinnamon	Cinnamomum zeylanicum	4
Akkarkhara	Anacyclus pyrethrum	2
Honey	Mel	3

All these must be finely ground in honey. It is then converted into Halwa. Afterwards 50 silver leaves or Warkhai roopa should be mixed with this Halwa.

Dose—$\frac{1}{2}$ to 2 tolas should be taken twice a day with cow's milk.

Ther. use—Strength giver of heart and brain, also for incontinence of urine and sexual debility.

32. *Kushmanda Rasayanam*—

Confection of squash. In preparing this medicine, old ripe gourds are selected. Those not at least a year old, are not approved.

They are longitudinally divided into two halves and the pulp scraped out in thin flakes by an iron comb or scraper. The watery juice that oozes out abundantly during this process is preserved, the seeds being rejected. The pulp is boiled in the above mentioned juice, till softened. It is then tied up tightly in a cloth, and the fluid portion allowed to strain through it. The softened and drained pulp is dried in the sun and the watery portion preserved for future use. Fifty tolas of the prepared pulp are fried in sixteen tolas of clarified butter, and again boiled in the juice of the fruit, till reduced to the consistence of honey. To this are added fifty tolas of refined sugar and the whole is heated over a gentle fire, till the mass assumes such a consistence as to adhere to the ladle. The pot is now removed from the fire and the following substances, namely:—Long pepper and ginger each 2 tolas, Cumin seeds, Cardamoms, Cinnamon leaves called tejapatra, Black pepper and Coriander each half a tola in fine powder, are added to the syrup and stirred briskly with a ladle, till the mass is cool. Eight tolas of honey are now added to the confection which is preserved in a new earthen pot.

Dose—The dose of this medicine is from one to two tolas according to the age and strength of the patient.

Ther. use—It is useful in hæmoptysis, phthisis, asthma, ulceration of the lungs, hoarseness, etc.

33. *Shrirag*—

The chief ingredient is—

Bilva. | Aegle marmelos.

Dose—$\frac{1}{4}$ to 1 tola, to be taken three times a day.

Ther use—Astringent. Useful in chronic diarrhœa and dysentery.

Decoctions.

34. *Abhayadhi*—

Abhaya	Chebulic myrabolans.
Musta.	Cyperus rotundus.
Dhanyaka.	Coriandrum sativum.
Raktachandana.	Pterocarpus santalinus.
Padmaka.	Prunus pudum.
Gudoochi.	Tinospora cordifolia.
Patha.	Cissempelos pareira.
Katuki.	Picrorrhiza kurroa.

Dose—$\frac{1}{2}$ to 2 tolas to be taken twice a day.

Ther use—Bitter tonic, alterative and laxative; useful in long continued fevers, anorexia, and constipation.

35. *Decoction Dasamoola*—

Salaparni.	Desmodium Gangeticum.
Prisniparni.	Uraria Lagopoides.
Kantakari.	Solanum Jacquinii.
Vrihati.	Solanum Indicum.
Gokshura.	Tribulus terrestris.
Vilva.	Aegle marmelos.
Syonake.	Colasanthes Indica.
Gambhari.	Gmelina arborea.
Patala.	Stereospermum suaveolens.
Ganikarika.	Premna spinosa

To prepare decoction in the usual way.

Dose—1 to 2 ounces to be taken twice or thrice a day as the case may be.

Ther. use—In remittent fevers, puerperal fever, inflammatory affections within the chest, affections of the brain and many other diseases supposed to be caused by derangement of all the humours.

36. *Guduchyadi Decoction*—

This group called Guduchyadi consists of Tinospora Cordifolia, the bark of Melia Azadirachta, coriander seeds, prunus padum, and Pterocarpus Santalinus.

Dose—½ to 2 tolas to be taken twice a day.

Ther. use—Bitter tonic, stomachic and anti-periodic; useful in dyspepsia, dysentery and malarial fever.

FERMENTED INFUSIONS AND DECOCTIONS.

37. *Draksha Asava*—

Chief ingredients are—

Draksha.	Vitis vinifera.
Dhataki pushpa.	Woodfordia floribunda, (flowers of).
Sugar.	Saccharam.

Dose—½ to 2 tolas to be taken twice a day after food.

Ther. use—Stimulant, diuretic and diaphoretic. Useful in anorexia, indigestion and Dyspepsia.

38. *Kutajaarishta or fermented liquor of kutaja*—

Kutaja root-bark.	Holarrhena anti-dysenterica 12 seers.
Raisins.	6¼ ,,
Madhuka.	Flowers of Bassia latifolia.
Gambhari.	Bark of Gmelina arborea.

Each eight tolas.

Boil them together in two hundred and fifty-six seers of water, till reduced to sixty-four seers, and strain. Then add flowers of Woodfordia floribunda (Dhataki) two seers and a half, treacle twelve seers and a half, and let the mixture ferment for a month, after which it will be ready for use.

Dose—½ to 2 tolas twice a day after meals.

Ther. use—Astringent, stimulant and anti-periodic; useful in chronic diarrhœa, dysentery and continued fevers.

39. *Loha-asava*—

Iron powder.
The three acrids.
The three myrabolans.
Ptychotis ajowan.
Embelia ribes.
Tubers of Cyperus rotundus.
Roots of Plumbago zeylanicum.

} 32 tolas each.

To these should be added 64 palas (8 seers) of honey, 12½ seers of treacle and 120 seers of water. All these to be placed in an earthen jar long in use for storing ghee.

The mouth of the jar must be closed. After a month the fermented liquid should be strained out. This drink should be administered in accordance with the condition of the patient and the nature of the disease.

Dose—½ to 2 tolas twice a day.

Ther. use—Tonic, alterative; useful in anæmic dropsy.

LINIMENTS, THAILAMS AND OINTMENTS.

40. *Adityapaka Thaila*—

Sesamum oil. 4 seers.
Madder.
The three myrabolans.
Lac.
Turmeric (Curcuma longa).
Orpiment.
Realgar.
Sulphur.
Equal parts (in all one seer.)
Mix and expose to the sun.
Ther. use—In eczema, scabies, etc.

41. *Aswaghandha Bala Lakshāthi Thailam*—

	TOLAS.
Penneru gadda (Withania somnifera)	8
Root of chittamutty (Sida cordifolia)..	8
Lac (Lac sticks)	8

Add to the above 12 seers of water by measure and reduce to one-fourth of it by boiling, add to the decoction three-fourths viss of gingelly oil, 3 visses of cow's buttermilk and mix.

To the above mixture, add the paste of the following :—

Aswaghandha (Withania somnifera).
Root of chittamutty (Sida cordifolia).
Sannarashtram (Alpinia chinensis).
Renukalu (Piper aurantiacum).
Chengalva koshtu (Aplotaxis auriculata).
Thungah gaddalu (Cyperus rotundus).
Sreeghandham (Santalum alba).
Turmeric (Curcuma longa).
Katchoram („ zodoaria).
Katakarohini (Picrorrhiza kurroa).
Sathapa (Ruta angustifolia).
Sathaguppi (Seeds of Anethum sowa).
Pullah lakka (Aristolochia indica).
Leaves of dushtapa (Daemia extensa).
Seeds of mullanghi (Raphanus sativus).
Devadaru (Cedrus deodara).
Mangishta (Rubia cordifolia).
Athimaduram (Glycyrrhiza glabra).
Vettiveru (Andro pogon muricatus)
Sugandha pala (Hemidesmus indicus).
Ghantu Bharanghy (Clerodendron siphonanthus).
Thamara gadda (Root of Nymphæ lotus).
Padmakesaram (Thalamus of Nymphæ lotus).

Take above drugs each of the weight of a two-anna piece or guriginga, then rub till paste is formed and at last mix in the decoction.

Boil the same by shaking it, till it comes to thailapakam.

Dose.—3 to 8 drops—should not be given for more than three days.

Ther. use.—Useful in consumption, haemoptyis, anaemia, diabetes and chronic dysentery—should not be given for more than a week.

42. *Chakramarda Thaila*—

Chief ingredients are—

Chakramarda (Cassia tora).
Bhringaraj (Wedelia calendulacea) (Eclipta alba). ?

Ther. use.—Useful in eczema and ringworm.

43. *Dadrughna ointment*—

Chief ingredient is—

Rasakarpoora (Mercuric chloride).

Ther. use—Useful in ringworm, psoriasis and other chronic skin diseases.

44. *Ksheerabala oil*—

Gingelly oil	1 bottle.
Milk	4 bottles.
Bark of the root of sida cordifolia	5 palams.

Grind in milk. Boil all these until all water goes away. Every day add the same kalkam without gingelly oil.

Repeat the process as many times as required.

Ther. use—All nervous diseases.

Dose.—Four annas weight to be given daily in decoction of cumin seeds.

45. *Compound oil of vitex negundo*—

Karunuchi (Vitex negundo).

Four palams of the above in one measure of water to be pounded and pressed out three times.

To this water add the following medicines for kalkam.

Vasambu (Acorus calamus).
Myrabolans without kernel.
Kolarakku (Lac sticks).
Sandal wood (Pterocarpus santalinus)—$1\frac{1}{4}$ kazanchi each.
Kadugurogini (Picrorrhiza Kurroa).
Boil into decoction.

The kalkam medicines are to be ground well. One nazhi (one-fourth measure) of cocoanut oil, must be added to the above decoction and then boiled and on the day it is to be strained, the milkly juice of two copras or dried cocoanuts is to be added. Boil again until the whole is of arakkupakam.

Apply this on the head.

A patient—for a month's use may require three nazhis.

Ther. use—*For* glandular swellings of the neck.

46. *Panchavalkaladhi Thailam*—

Bark of five varieties of figs.
Do. curcuma longa.
Hemidesmus indicus.
Made into a decoction.

KALKAM.

Gingelly oil.
Root bark of plantain.
Liquorice (Glycyrrhiza glabra).
Cinnamom bark (Cinamomum zeylanicum).
Vilamicham (Andropogon muricatus).
Koshtam (Aplotaxis auriculata).
Chandanam (Santalinum).

Prepare oil in the usual way.
Ther. use—Skin diseases, rheumatism, and leprosy.

47. *Vidanga Thaila*—

Chief ingredients are—
Vidanga (Embelia ribes).
Dantimula (Croton tiglium).
Swarjika (Carbonate of soda).

Ther. use—To be applied to the forehead. For relieving severe headache. Useful in hemicrania.

48. *Vishagharbha Thaila*—

Sesamum oil	4 seers.
Aconite root	8 tolas.
Karanja (seeds of pongamia glabra)	Each 4 tolas.
Turmeric (Curcuma longa)	
Daruharidra (wood of Berberis aristata)	
Arka (root of Calotropis gigantea)	
Karavira (Nerium odorum)	
Tagara (flowers of Tabernae montana cornaria)	
Vacha (Acorus calamus)	
Kushtha (Aplotaxis auriculata)	
Red sandalwood (Pterocarpus santalinus)	
Saptaparna (Bark of alstonia scholaris)	
Nirgundi (Leaves of vitex negundo)	
Madder	
Asphota (Valaris dichotoma)	
Malati (Aganosma caryophyllata)	
Cow's urine	16 seers.

The solid ingredients should be beaten into a paste with water and then boiled with the oil and cow's urine till the watery portion is evaported.

Ther. use—Anodyne, sedative; useful in hemicrania, paraplegia, sciatica, neuralgia and lumbago.

49. *Abhayadi Modak.*—(*in Tablets*).

Chief ingredients are :—

Trivrit (Ipoemea Turpethum).
Sugar (Saccharam).
Dantimula (Croton tiglium.)
Pippali (Piper longum).
Amalak (Emblic myrabolans).

Dose.—One to be taken as directed with warm water.
Ther. use.—Cathartic.

50. *Amrita-Guggulu.*—

Chief ingredeints are—

Gudoochi (Tinospora cordifolia).
Ela (Elettarria cardamomum).
Vidanga (Embelia Ribes).
Indrayava (Holarrhena antidysenterica)
Triphala (The three myrobolans).
Gugulu (Balsamodendron mukul).

Dose.—1 to 4 pills of 6 grains three times a day with water.

Ther. use.—Alterative, and tonic. Useful in rheumatism.

51. *Chandraprabha Gutika.*—

Chief ingredients are—

Trivrit (Ipoemea turpethum).
Dantimoola (Croton tiglium).
Twak (Cinnamomum zeylanicum).
Ela (Elettaria cardamomum).
Loha Bhasma (Iron bhasmam.)
Sugar (Saccharam).
Vanshalochana (Bamboo manna).
Yavakshara (Carbonate of potash).
Swarjika (Carbonate of soda).
Makshika Bhasma (Calcined iron pyrites).

Dose.—1 to 4 pills of 6 grains each three times a day with milk or water.

Ther. use.—Tonic, diaphoretic and diuretic; useful in albuminuria, phosphaturia, and gonorrhoea.

52. *Dhanwantari pills.*—

Dry ginger (zingiber officicinalis).
Kadukkai (Chebulic myrabolans).
Omum (Ptychotis ajowan).
Nelavemu (Ophelia chiretta).
Cardamom (Elettaria cardamomum).
Cinnamom seeds (Cinnamomum zeylanicum).
Bark of the root of—
Cheruchinta (Solanum indicum).
Rudraksham (Gomphrena globosa).
Davadaram (Deodara devadara).
Patcha Karpooram (Camphorae fragrans).
Kandhivenna (dried dung of a baby elephant).
Saffron (Sassafaras indica).
Secretion of the civet cat.
Jawadhi.

All these in equal parts. First grind in decoction of cinnamom seeds and then in rose water.

Dose.—1 to 4 pills to be taken three times a day.

Ther. use —Dyspepsia, hiccough and indigestion.

53. *Gokshuradi Gugulu.*—

Chief ingredients are—

Gokshura (Tribulus terrestris).
Gugulu (Balsamodendron mukul).
Trikatu (the three Acrids).
Triphala (the three Myrabolans).

Dose.—1 to 4 pills of 6 grains each three times a day.

Ther. use —Diuretic, alterative and tonic. Useful in albuminuria, gonorrhoea and rheumatism.

54. *Mandura Loha.* —

Chief ingredients are—

Trikatu (the three Acrids).
Chitraka (Plumbago zeylanicum).
Vidanga (Embelia ribes).
Makshika bhasma.
Mandoora bhasma.

Dose.—1 to 4 pills of 2 grains each to be taken twice a day after food.

Ther use.—Tonic and haematinic. Useful in asthma, general debility, sexual debility and enlargement of spleen.

55. *Punarnava Mandura.*—

Chief ingredients are—

Mandura Bhasma and Boerhavia diffusa.

Dose.—1 to 4 pills of 2 grains each to be taken twice a day after food with milk.

Ther. use.—Tonic, haematinic. Useful in dropsy. Also in chlorosis, heart affections, general and sexual debility.

56. *Shoathahar Loha.*—
Chief ingredients are—
Trikatu (the three Acrids).
Loha bhasma (Calcined iron).
Yavakshara (Carbonate of potassium).
Dose.—1 to 4 pills of 6 grains each to be taken three times a day after food.
Ther. use — Tonic, haematinic, gastric stimulant and antacid. Useful in dropsy due to anaemia, Bright's diseases and heart affections.

57. *Trayodasanga Gugulu.*
Bark of Acacia arabica.
Physalis flexuosa.
Habusa (aromatic black stalks like those of black pepper)
Tinospora cordifolia.
Asparagus racemosus.
Tribulus Languinosus.
The seeds of Lettsomnia nervosa.
Vanda roxburghi.
Dill seeds.
Curcuma zerumbet.
Seeds of Ptychotis ajowan.
Dry ginger.
One tola being taken of the pulv of each of these ;—
Balsamodendron mukhul 12 tolas and ghee 6 tolas.
At first rub or pound the exudation of Balsamodendron with the ghee and then mix the powder with it and convert it into pills of six grains each.
Dose.—1 to 4 pills three times a day.
Ther. use.—Useful in asthma and cystitis.

58. *Yogaraj Gugulu.*—
Roots of Plumbago zeylanicum.
„ piper longum.
Seeds of Ptychotis ajowan.
„ Nigella Sativum.
„ Embelia ribes.
„ Chidium diffusum.
„ Cuminum.
Pinus deodara
Piper Chaba.
Cardamoms.
Saindhava salt.
Aplotaxis auriculata.
Vanda roxburghi.
Tribulus Languinosus.
Coriander seeds.
The Three Myrabolans.
Tubers of Cyperus rotundus.
The Three Acrids.
Cinnamomum zeylanicum.
Roots of Andropogon Muricatus.
Carbonate of potash.
Pinus webbiana.
Leaves of Cinnamomum tamala.
All in equal parts, pound and mix them together. Take also purified Balsamodendron mukul equal to the combined measure of all the above ingredients. First pound it with ghee and add powders previously made and pound them again with ghee and convert into pills of 6 grains each.
Dose.—1 to 4 pills.
Ther. use.—Useful in paraplegia and hemiplegia.

59. *Agnitundi Vati*—
Chief ingredients are—
Kajjali (Sulphide of mercury).
Trikatu (The three Acrids).
Chitraka (Plumbago zeylanicum).
Two ksharas (Yavakshra and Swarjikashara).
Dose.—1 to 4 pills of one grain each with milk or water after meals.
Ther. use—Bitter, stomachic, tonic and stimulant. Useful in dyspepsia, indigestion, heart weakness, lumbago, anemia and sexual debility.

60. *Agni Rasa*—
Chief ingredients are—
Kajjali (Sulphide of mercury).
Haritaki (Terminalia chebula).
Pippali (Piper longum).
Bidhitakatwak (Terminalia belerica).
Yastimadhu (Glycyrrhiza glabra).
Vasa (Adhatoda vasica.)
Dose.—20 to 60 grains to be taken with honey three times a day followed by milk.
Ther. use—Alterative, tonic, expectorant and anti-spasmodic. Useful in bronchitis, hoarseness of voice, asthma, pneumonia and other chest diseases.

61. *Agnisoot Rasa*—
Chief ingredients are—
Kajjali (Sulphide of mercury).
Shankha bhasma (Calcined conch).
Kapardi bhasma.
Maricha (Piper nigrum).
Dose.—2 to 8 pills of 1 grain each three times a day with rice water or whey.
Ther. use—Gastric stimulant and antiseptic. Useful in dyspepsia, diarrhoea and dysentery.

62. *Arogya Vardhani*—
Chief ingredients are—
Kajjali (Sulphide of mercury).
Loha basmam (Iron bhasmam).
Abbrak bhasma (Talc bhasmam).
Tamra bhasma (Copper bhasma).
Trifala (Three myrobalans).
Silajit (Exudation from rocks).
Gugulu (Balsamodendron mukul).
Chitrak (Plumbago zeylanica).
Katuki (Picrorrhiza kurroa).
Dose.—1 to 4 pills of 5 grains to be taken three times a day with milk.
Ther. use—Alterative, aperient, and tonic; useful in dyspepsia.

63. *Agnikumara Rasa*—
Chief ingredients are—
Kajjali (Sulphide of mercury).
Trikatu (the three Acrids).
Swarjika (Carbonate of soda).
Shankha bhasma (Conch shell bhasmam).
Dose.—1 to 2 pills to be taken twice a day.
Ther. use—Useful in colic, diarrhoea and indigestion.

64. *Brihat Chandrodaya Makardhwaja*—
Makaradhwaja (1 part).
Camphor
Nutmegs (Myristica fragrans) } each four parts.
Black pepper (Piper nigrum)
Cloves (Eugenia caryophyllata)
Musk (one-sixteenth part).
Mix together and make into pills about ten grains each.
Dose.—1 to 2 pills twice a day with milk.
Ther. use—Tonic, useful in nervous and general debility, impotence, premature old age, etc.

These pills are enclosed and wrapped in betel leaves and chewed. Along with this medicine, a generous diet consisting of meat, ghee, pulses, etc., should be taken.

65. *Devkusumadi Rasa*—
Chief ingredients are—
Lavanga (Eugenia caryophyllata).
Chandana (Santalum album).
Saffron (Sassafera indica).
Mercuric chloride.
Dose.—1 to 4 pills of one grain each to be given three times a day.
Ther. use.—Alterative and tonic; useful in syphilitic affections.

66. *Ekangaveera Rasa*—
Chief ingredients are—
Kajjali (Sulphide of mercury).
Vanga bhasma (Calcined tin).
Loha bhasma (Calcined iron).
Naga bhasma (Calcined zinc).
Tamra bhasma (Calcined copper).
Abharka bhasma (Calcined talc).
Vishatinduka (Nux vomica).
Dose.—1 to 4 pills of 2 grains each to be taken twice a day.
Ther. use.—Tonic, alterative. Useful in hemiplegia, paraplegia and paralysis.

67. *Jatiphaladhi gutika*—
Nutmeg.
Arabian dates.
Opium.
All in equal measure—macerate in the expressed juice of betel leaves, pills are formed of three ratis each.
Dose.—1 to 4 pills of one grain each to be taken three times a day.
Ther. use.—Anodyne and astringent. Useful in dysentery, acute or chronic diarrhoea.

68. *Jalodarari Rasa*—
The chief ingredients are—
Piper longum.
Black pepper.
Copper.
The pulv of the tubers of curcuma longa

Take equal measures of these and pound for one day in the milky juice of Euphorbia nerifolia. To it, add the pulv of the seeds of croton tiglium, equal to the united measure of the drugs named above.

Dose.—1 to 3 pills of one grain each to be taken with water.

Ther. use.—Cathartic; useful in ascites and dropsy.

69. *Krimimudgara Rasa*—

	TOLAS.
Mercury	1
Sulphur	2
Seeds of Cnidium diffusum	3
Embelia ribes	4
Strychnos nux vomicae	5
Seeds of Butea frondosa	6

Pound all these together and convert into pill mass.

Dose.—1 to 4 pills of 5 grains each twice a day.

Ther. use.—Destroyer of all kinds of intestinal worms in three days.

70. *Kanak Sundara Rasa*—

Chief ingredients are—

Kajjali (Sulphide of mercury).

Datura seeds.

Dose.—1 to 3 pills of 2 grains each three times a day with sugar. Each pill contains one-third grain datura seeds.

Ther. use—Diuretic, antispasmodic and anodyne; useful in neuralgia, retention of urine, and acute sore throat.

71. *Lakshmivilas Rasa*—

Chief ingredients are—

Abhrak Bhasma.

Kajjali (Sulphide of mercury).

Camphor.

Datura seeds.

Cannabis Indica, etc.

Dose—1 to 4 pills of 2 grains each twice a day, wrapped in betel leaves followed by milk.

Ther. use—Tonic, aphrodisiac, anodyne, useful in sexual debility, phthisis, asthma.

72. *Mriganka Rasa*—

Mercury	1 tola.	Sulphur	2 ,,
Bhasma of gold	1 ,,	Fried borax	2 mashas.
Bhasma of pearls	3 tolas.		

Pound these in Kanjika and make a ball and when dry have it enclosed in a crucible and roasted in the apparatus called lavana yantra.

Dose—1 to 4 pills of 1 grain each with milk twice a day after meals.

Ther. use—Tonic, haematinic and alterative; useful in phthisis.

73. *Maha Mrityunjaya Loha*—

Chief ingredients are—

Kajjali (Sulphide of mercury).	Swarjika (Carbonate of soda).
Abhraka bhasma.	Manoshila (Realgar).
Loha ,,	Haritala (Orpiment).
Tamra ,,	Tutha (Sulphate of copper).
Yavakshara (Carbonate of potash).	

Dose—1 to 4 pills of 2 grains each twice a day after meals.

Ther. use—Alterative, tonic, diaphoretic; useful in diseases of spleen, hepatic colic, asthma and headache. Also in malaria with enlargement of spleen.

74. *Maha Lakshmi Vilasa Rasa*—

	TOLAS.		TOLAS.
Mica	8	Camphor	4
Sulphur	4	Nutmeg flowers (Myristica fragrans (flower))	2
Mercury	2	Seeds of datura fastuosa	2
Tin	1	Nutmeg (myristica fragrans)	2
Silver	1	Gold	1
Swarnamakshika (Iron pyrites)	½		
Copper	4		

Pound all these together with the expressed juice of betel leaves and form pills of a grain each.

Dose—1 to 4 pills three times a day with milk.

Ther. use—Tonic, alterative and haematinic; useful in phthisis, and general and sexual debility.

75. *Maha Jwarankusa Rasa*—

The ingredients are—

Mercury.	Iron.	Gold.
Sulphur.	Tin.	Mica.
Copper.	Swarnamakshika.	Red ochre.
Cinnabar.	Realgar.	Borax fried.
Orpiment.		

Taking these in equal measure, they are macerated for three days in the expressed juice of decoction of citrus acida of the variety called Gonra, the leaves of Ocimum Sanctum, the roots of Plumbago Zeylanica, the leaves of Cannabis Sativa, and the leaves of Tamarindus Indica. Pounding them together, pills are formed of the weight of 2 grains each.

Dose—1 to 4 pills to be taken three times a day.

Ther. use—Useful to check attacks of malarial fever.

76. *Mrityunjaya Rasa*—

Chief ingredients are—

Kajjali (Sulphide of mercury).
Aconite (Aconitum ferox).
Tankana (Borax).

Dose—1 to 3 pills of 1 grain each three times a day with water.

Ther. use—Diaphoretic, antipyretic and anodyne; useful in fevers, sore throat, neuralgia, and all acute inflammations as pneumonia, erysipelas and neuralgic affections.

77. *Nityananda Rasa*—

The ingredients are—

Mercury obtained from Cinnabâr.	Piper Chaba.
Sulphur.	The roots of Piper longum.
Copper.	Habusha.
White brass.	Acorus calamus.
Tin.	Curcuma zerumbet.
Yellow orpiment.	Cissampelos hernandifolia.
Sulphate of copper.	Pinus deodara.
The ashes of conch shells.	Cardamom seeds.
The three acrids.	Lettsomia nervosa.
The three myrobalans.	Convolvuls Turpethum.
Iron.	The roots of Plumbago zeylanicum and the roots of croton polyandrum.
Embelia Ribes.	
Panchalavana (The five salts).	

Take equal measures of these and pound them together with the decoction of Chebulic myrobalans. Make pills of 2 grains each.

Dose—1 to 4 pills to be taken three times a day.

Ther. use—Tonic and alterative; useful in elephantiasis.

78. *Naracha Rasa*—

Mercury (1 part).	Fried borax.
Sulphur.	Piper longum (2 parts).
Black pepper.	Dry ginger.

Seeds of danti (Croton polyandrum) divested of husk, equal to the united measure of the abovenamed drugs. Pound all these for three days in the exudation of Euphorbia nerifolia—Insert the pounded product within the hollow of a ripe cocoanut and roast in strong fire. When the roasting is completed, take out the compound and form pills of one grain each.

Dose—1 to 3 pills as directed by the physician.

Ther. use—Useful in constipation, cirrhosis of the liver with ascites and dropsy.

79. *Narayana Jwarankusa*—

Chief ingredients are—

Arsenic.	Haritaka (Chebulic myrobalans).
Aconite.	Trikatu (The three acrids).
Kajjali (Sulphide of mercury).	

Dose—1 to 4 pills of one grain each to be taken three times a day after food.

Ther. use—Antipyretic and antiperiodic; useful in malarial fever and anaemia.

80. *Panch Vakra Rasa*—

Chief ingredients are—

Kajjali (Mercury and sulphur).
Aconite (Aconitum ferox).
Maricha (Piper nigrum).
Pippali (Piper longum).

Dose—1 to 4 pills to be taken every three hours.

Ther. use—Useful in fevers and all local and acute inflammations, such as pneumonia tonsilitis, etc.

81. *Ramban Rasa*—

Chief ingredients are—

Haritala (Orpiment).

Hingula (Ferrula assafœtida).

Gandhaka (Sulphur).

Dose—1 to 4 pills, with ghee, three times a day after meals.

Ther. use—Tonic and antiperiodic. Useful in malaria when quinine is not tolerated. Useful in chronic skin diseases, e.g., eczema, psoriasis, etc., and asthma.

82. *Shwasakutara Rasa*—

Mercury.	Realgar.
Sulphur.	Black pepper.
Aconitum ferox.	The three acrids.
Fried borax.	

Take equal measures of each of these, pound them together with water and make pills of 1 grain each.

Dose—1 to 4 pills to be taken three times a day.

Ther. use—Sedative and diaphoretic; useful in fevers and painful neuralgic affections.

83. *Sarvanga Sundara Rasa*—

Mercury	1 part.	Corals	1 part.
Sulphur	1 „	Calcined conch shells.. ..	1 „
Fried borax	2 „	„ gold	1 „
Pearls	1 „	Iron	See infra.
		Cinnabar	See infra.

Macerate all these in the juice of Citrus acida, pound them together and make into a ball. Place this ball within a crucible and subject it to the process of roasting called Gajaputa in a strong fire. When cooled, take the ball out and pound the products. Add half a part of iron and cinnabar, (half the weight of iron) and mix them together. The measure of a dose is 2 grains and the vehicle is the pulv of Piper longum, or honey, or ghee or expressed juice of the betel-leaf, or sugar or the juice of ginger.

Dose—1 to 4 pills to be taken three times a day.

Ther. use—Alterative and sedative; useful in asthma and general debility.

84. *Smriti Sagar Rasa*—

Chief ingredients are—

Kajjali (Mercury and sulphur).

Manoshila (Realgar).

Haritala (Orpiment).

Tamra bhasma (Copper bhasmam).

Dose—1 to 4 pills of 1 grain each to be taken twice a day with Brahmi Ghrita followed by milk.

Ther. use—Alterative, tonic; useful in epilepsy and mania.

85. *Shanka Rasa* (Shanka Vati)—(in tablets)

Chief ingredients are—

Shankh bhasma (Conch shell bhasmam).

Chinchakshara (Tamarindus Indica).

Five salts (Five salts).

Trikatu (Three acrids).

Kajjali (Mercury and sulphur).

Aconite (Aconitum ferox).

Dose—1 to 4 tablets to be taken twice a day.

Ther. use—Useful in indigestion, intestinal colic and tympanitis.

86. *Tribhuvan Keerti Rasa*—

Chief ingredients are—

Rasasindura (Mercurial preparation (red oxide)).

Aconite (Aconitum ferox).

Trikatu (The three acrids).

Pippali moola, Piper longum (root).

Dose—2 to 6 pills of 1 grain each to be given every two hours, until fever subsides.

Ther. use—Anodyne, antipyretic and diaphoretic; useful in high fevers and all local acute inflammations, such as those of pneumonia, erysipelas and painful neuralgic affections.

87. *Trailokya Chinthamani Rasa*—

Chief ingredients are—

Kajjali (Sulphide of mercury).

Heerak bhasmam (Calcined diamond).

Suvarna bhasmam („ gold).

Raupya bhasmam („ silver).

Tamra bhasmam („ copper).

Abhraka bhasmam („ talc).

Mukta bhasmam („ pearl).

Pravala bhasmam („ coral).

Vaikrant bhasmam (Calcined diamond).
Haritala (Orpiment).
Manashila (Realgar).
Aconite (Aconitum ferox).

Dose—1 to 3 pills three times a day.

Ther. use—Useful in gastric disorders, general debility, asthma, phthisis, diarrhœa, colic, anæmia, sexual debility, etc.

88. *Vatari Rasa*—

Mercury	1 part.
Sulphur	2 parts.
The three myrabolans	3 „
Roots of Plumbago zeylanicum	4 „
Exudation of Balsamodendron mukhul	5 „

Pound these together with castor oil.

Dose—1 to 4 pills of 2 grains each to be taken three times a day.

Ther. use—All sorts of nervous diseases.

89. *Vadvanal Rasa*—

Chief ingredients are—
Kajjali (Sulphide of mercury).
Pancha lavana (Five salts).
Yavakshar (Carbonate of potash).
Swarjikakshar (Carbonate of soda).
Tankana (Borax).

Dose—1 to 4 pills of 5 grains each three times a day.

Ther. use—Stomachic, antacid, and carminative, indigestion, dyspepsia.

90. *Vataraktantaka Rasa*—

Take in equal measures of—
Mercury.
Sulphur.
Iron
Tubers of Cyperus rotundus.
Orpiment.
Realgar.
Silajit.
Exudation of Balsamodendron mukhul.
Embelia ribes.
The three myrabolans.
„ acrids.
Sea-froth.
Boerhaavia diffusa.
Pinus deodara.
Roots of Plumbago zeylanicum.
Serratula anthelmintica.
Berberis asiatica.
Clitorea ternatea of the white variety.

Macerate them thrice in the decoction of the myrabolans, and the expressed juice of the leaves of verbesina calendulacea and make pills of the size of the seeds of phaseolus radiatus.

Dose—1 to 4 pills of 2 grains each to be taken three times a day.

Ther. use—Useful in nervous diseases.

91. *Vasant Kusumakar Rasa*—

Chief ingredients are—
Vaikrant bhasma (Diamond Bhasmam).
Suvarna „ (Gold „).
Abhrak „ (Talc „).
Mukta „ (Pearl „).
Praval „ (Coral „).
Vanga „ (Tin „).

Dose—1 to 4 pills of 1 grain each, three times a day with milk.

Ther. use—General tonic; useful in diabetes insipidus, sexual debility, phthisis, asthma and general weakness.

92. *Maha Yogaraja Gugulu*—

Chief ingredients are—
Guggulu (Balsamodendron mukul).
Triphala (The three myrabolans).
Vanga bhasma (Tin bhasmam).
Raupya „ (Silver „).
Naga „ (Zinc „).
Loha „ (Iron „).
Abhrak „ (Talc „).
Rasa sindura (Mercurial preparation red oxide).
Mandura bhasma (Calcined Iron oxide).

Dose—1 to 4 pills of 1 grain each, three times a day.

Ther. use—Alterative, tonic. Useful in synovitis, paraplegia, hemiplegia and other nervous affections.

93. *Chathurmuka Rasa*—

Mercury, Sulphur, Iron, Mica, Gold — One part each.

Pound these together with the expressed juice of Aloe Indica and make into a ball. Cover this ball with the leaves of Ricinus communis, and keep it for three days within a heap of paddy. Take it out after that period, and make pills of one grain each.

Dose—1 to 4 pills, to be taken twice a day after meals.

Ther. use—Tonic and haematinic; useful in phthisis, asthma and anaemia.

94. *Mahatiktha Ghritham*—

Chief ingredients are—
Saptaparna (Alstonia scholaris).
Katuki (Picrorrhiza kurroa).
Patha (Cissampelos pareira).
Parpat (Oldenlandea herbacea).
Moorva (Clematis triloba).
Vasa (Acorus calamus).
Sariva (Hemidesmus indicus) and other bitter tonics.

Dose—½ to 2 tolas, to be taken twice a day.

Ther. use—Bitter tonic and alterative; useful in skin diseases.

95. *Pranadhi Gutika*—

Chief ingredients are—
Haritaki (Chebulic myrabolans).
Shunti (Zingiber officinale).
Maricha (Piper nigrum).
Pippali (Piper longum).
Pippali moola (Root of piper longum).
Sugar (Saccharum).

Dose—1 to 4 tablets, to be taken twice a day with water.

Ther. use—Laxative and alterative; useful in dyspepsia and constipation.

96. *Rasna Gugulu*—

Chief ingredients are—
Rasna (Vanda Rosburghii).
Gugulu (Bdellium).

Dose—1 to 4 pills, to be taken three times a day.

Ther. use—Alterative and tonic; useful in sciatica, paraplegia, nemiplegia and other nervous affections.

97. *Kanchanar Guggulu*—

Chief ingredients are—
Kanchnartwak (Bauhinia variegata).
Triphala (The three myrabolans).
Trikatu (The three acrids).
Varuna (Crataeva religiosa).
Gugulu (Bdellium).

Dose—1 to 4 pills, to be taken three times a day with water.

Ther. use—Alterative and tonic; useful in scrofula, fistula, leprosy, ulcers, etc.

98. *Chandrodaya No.* 1 (*Suvarna Ghatit makhardhwaj*)—

Dose—2 to 6 grains, to be taken twice a day with honey followed by milk.

Ther. use—Useful in sexual debility and nervous diseases.

Index of Formulae of Compounds.

Serial number and name of the drug.

1. Abhrak bhasmam.
2. Coral bhasmam.
3. Mukta bhasmam.
4. Makshika bhasmam.
5. Raupya bhasmam.
6. Tamra bhasmam.
7. Annabedhi sinduram.
7A. Ashta churnam.
8. Avipattikara churnam.
9. Arkamula churnam.
10 Chithrakamuladhi churnam.
11. Compound powder of Justicia Adhatoda.
12. Compound constipation.
13. Eladi churnam.
14A. Leghu Gangadhara churnam.
14B. Vridha Gangadhara churnam.
15. Kalyanaksharam.
16. Lavangadi churnam.
17. Musalyadi churna.
18. Inhalation powder for influenza.
19. Rohitak churnam.
20. Swayamagni.
21. Swadishta Virechan churnam
22. Saraswathi churnam.
23. Amritha Bhalataki.
24. Amritha Prasa Ghritha.
25. Abhayamalliki.
26. Aazairaisah.
27. Brahmi Ghritham.
28. Chyavanaprasa.
29. Dasamoola Rasayanam.
30. Lasunadhi Ghritha.

Serial number and name of the drug.

31. Majoonai Khuvathiaibah.
32. Kushmandaka Rasayanam.
33. Shrirag.
34. Abhayadhi.
35. Decoction Dasamoola.
36. Guduchyadi Decoction.
37. Draksha Asava.
38. Kutajaarista or fermented liquor of kutaja.
39. Loha-asava.
40. Adityapaka Thaila.
41. Aswaghandha *Bala* Lakshathi Thailam.
42. Chakramarada Thaila.
43. Dadrughna ointment.
44. Ksheerabala oil.
45. Compound oil of Vitex negundo.
46. Panchavalkaladhi Thailam.
47. Vidang Taila.
48. Vishagharbha Thaila.
49. Abhayadi Modak.
50. Amrita-Gugulu.
51. Chandraprabha Gutika.
52. Dhanwantari pills.
53. Gokshuradi Gugulu.
54. Mandura Loha.
55. Punarnava Mandura.
56. Shoathahar Loha.
57. Trayodasanga Gugulu.
58. Yogaraj Gugulu.
59. Agnitundi Vati.
60. Agni Rasa.
61. Agnisoot Rasa.
62. Aarogya Vardhani.
63. Agnikumara Rasa.
64. Brihat Chandrodaya Makardhwaja.

Serial number and name of the drug.

65. Devkusumadi Rasa.
66. Ekangaveera Rasa.
67. Jatiphaladhi Gutika.
68. Jalodarari Rasa.
69. Krimimudgara Rasa.
70. Kanak Sundara Rasa.
71. Laxmivilas Rasa.
72. Mriganka Rasa
73. Maha Mrityunjaya Loha.
74. Maha Lakshmi Vilasa Rasa.
75. Maha Jwarankusa Rasa.
76. Mrityanjaya Rasa.
77. Nityananda Rasa.
78. Naracha Rasa.
79. Narayana Jwarankusa.
80. Panch Vakra Rasa.
81. Ramban Rasa.
82. Shwasakutara Rasa.
83. Sarvanga Sundara Rasa.
84. Smriti Sagar Rasa.
85. Shanka Rasa (Vati).
86. Tribhuvan Keerti Rasa.
87. Trailoyka Chinthamani Rasa.
88. Vatari Rasa.
89. Vadvanal Rasa.
90. Vataraktantaka Rasa.
91. Vasant Kusumakar Rasa.
92. Maha Yogaraja Gugulu.
93. Chathurmuka Rasa.
94. Mahatiktha Ghritham.
95. Pranadhi Gutika.
96. Rasna Gugulu.
97. Kanchanar Gugulu.
98. Chandrodaya No. I (Suvarna Ghatitmakhardhwaj).

APPENDIX No. 6.

Statement showing the diseases treated by Ayurvedic and Unani medicines from 12th July 1918 to 31st December 1919.

Names of diseases treated.	Total number of in-patients treated.	Results.				Total number of out-patients.	Total both in- and out-patients.
		Cured.	Relieved.	Discharged otherwise.	Died.		
Asthma	12	..	12	..	..	19	31
Bronchial catarrh	1	1	..	..	..	16	17
Acute bronchitis	3	2	1	..	..	43	46
Chronic bronchitis	10	2	6	2	..	8	18
Tubercular phthisis	21	..	14	7	..	6	27
Pneumonia	2	2	..	..	..	..	2
Influenza	10	7	1	1	1	81	91
Influenza, capillary bronchitis	1	..	..	..	1	..	1
,, broncho-pneumonia	13	5	1	3	4	..	13
Whooping cough	..	..	..	..	..	1	1
Pharyngitis	..	..	..	..	..	1	1
Tonsilitis	..	..	..	..	..	1	1
Relaxed throat	..	..	..	..	..	1	1
Indigestion	..	..	..	..	..	7	7
Gastric catarrh	..	..	..	..	..	1	1
Colic intestinal	1	1	..	..	..	4	5
Dyspepsia	..	..	..	..	..	22	22
Chronic gastritis	12	7	4	1	..	20	32
Constipation	3	3	..	..	..	163	166
Diarrhœa	1	1	..	..	..	19	20
Chronic diarrhoea	2	..	2	..	..	1	3
,, enteritis	2	1	1	..	..	1	3
Dysentery (acute and chronic)	15	11	1	3	..	70	85
Dilatation of stomach	3	1	1	1	..	..	3
Lead colic	1	..	1	..	..	..	1
Haemorrhoids	..	..	..	..	..	1	1
Pyrexia of uncertain origin	..	..	..	..	..	46	46
Remittent fever	..	..	..	..	..	1	1
Hysteria	1	1	..	..	..	1	2
Epilepsy	1	..	..	1	..	6	7
Hemiplegia	5	..	3	2	..	..	5
Neuralgia	..	..	..	..	..	16	16
Facial Paralysis	1	..	1	..	..	3	4
Lumbago	1	1	..	..	..	5	6
Neurasthenia	2	..	1	1	..	..	2
Glycosuria	1	1	..	..	..	..	1
Diabetes inspidus	2	1	1	..	..	..	2
Diabetes mellitus	6	1	3	2	..	1	7
Constitutional syphilis	1	..	1	..	..	2	3
Taenia	..	..	..	..	..	84	84
Psoriasis	..	..	..	..	..	3	3
Scabies	..	..	..	..	..	25	25
Eczema	..	..	..	..	..	4	4
Ascaris lumbricoides	8	4	..	4	..	111	119
Dysuria	..	..	..	..	..	1	1
Dysmenorrhoea	..	..	..	..	..	4	4
Gonorrhoea	..	..	..	..	..	14	14
Gleet	..	..	..	..	..	3	3
Acute rheumatism	2	2	..	..	..	..	2
Chronic rheumatism	2	..	1	1	..	17	19
Gonorrhoeal rheumatism	1	1	..	..	..	1	2
Acute Bright's disease	4	2	..	2	..	2	6
Chronic Bright's disease	9	7	1	1	..	..	9
Anaemia fron ankylostomiasis	9	4	3	2	..	1	10
Anaemic dropsy	..	..	..	..	..	2	2
Malarial fever	9	4	5	..	..	359	368
Malarial fever and asthma	2	..	1	1	..	..	2
Malarial enlarged spleen	11	1	5	5	..	4	15
Enlarged spleen and Kala-azaar	3	..	2	1	..	1	4
Jaundice catarrhal	..	..	..	..	..	3	3
Cirrhosis of the liver and ascites	17	4	4	7	2	..	17
Spleno-medullary leukaemia	1	..	..	1	..	..	1
Hepatitis	1	1	..	..	..	1	2
Infantile biliary cirrhosis	..	..	..	..	..	5	5
General debility	1	1	..	..	..	10	11
Dilatation of the heart	1	..	1	..	..	1	2
Leprosy Anaesthetic	6	..	4	2	..	6	12
Leprosy tubercular	4	..	2	2	..	2	6
Lymphatic fever and elephantiasis	1	..	1	..	..	2	3
Scrofula (tubercular glands)	..	..	..	..	..	1	1
Peripheral neuritis	1	..	1	..	..	..	1
Total ..	227	80	86	53	8	1,234	1 461

APPENDIX No. 7.

The following substances were analysed by the Chemical Examiner, Madras, and included in the preliminary report.

1. A sample of Poornachandrothayam which is supposed to contain gold was obtained from Venkataramana Dispensary, Mylapore. Some of the Indian physicians doubt whether gold which is not volatile is present in the compound. Chemical Examiner's report showed that the sample contained gold.

2. Specific powder—vide Notes No. 22. This was found to consist of mostly ferric oxide traces of gold, lime sulphates.

3. Poonier Chunam—vide prescription No. 32 contained lime, sodium oxide, potassium oxide, alumina, carbonic acid and chlorine.

4. Coral Basmam—vide prescription No. 32 contained calcium carbonate and sulphide.

5. Talc Basmam—vide prescription No. 35 contained alumina, magnesia and silica.

6. Iron Kalpam—vide prescription No. 36 contained ferric oxide and some vegetable powder.

7. Vasantha Kusumakaram contained mercury, gold, iron, lime, silica, alumina and traces of tin.

8. Karooba and Pearl Basmam contained mostly resinous product resembling benzoin and traces of lime were also present in the ash.

Substances analysed by the Chemical Examiner, Madras.

Vegetable Drugs.

1. Chempullanhi (Colycopterus Floribunda)—yields an extract whose colour reactions resemble those of Santonin.

2. Eclipta Prostrata—contains a resin the identity of which could not be ascertained. It does not yield the reactions of Podophyllin.

Neither Glucosides nor alkaloids were detected in them.

3. Phyllanthus Niruri	—Alkaloids	Nil.
	Glucosides	Nil.
4. Adenema Hyssopufolia	—Alkaloids	Nil.
	Glucosides	Present.
5. Vernonia anthelmintica	—Alkaloids	Nil.
	Glucosides	Present.
6. Asteracanthus Longifolia	—Alkaloids	Nil.
	Glucosides	Nil.

Minerals.

7. Mukta Basma—mostly calcium carbonate.

8. Raupya Basma—metallic silver.

9. Tamra Basma—mixture of metallic copper and copper oxide.

10. Abraka Basma—plenty of silica and alumina with traces of iron (1,000 times calcined).

11. White powder—Calomel.

12. Brihat chandrodaya Makaradwaja—vegetable matter, silica, alumina, gold and mercury with traces of iron. No alkaloids were detected in it.

13. Vasanthakusmakara Rasa—Vegetable matter, alumina, lime, mercury and gold. No alkaloids were detected.

14. Smrithisagara Rasa—vegetable matter, copper, mercury and arsenic. No alkaloids were detected in it

APPENDIX No. 8.

List of some of the important Indian drugs suggested to be included in the lectures on Materia Medica.

1. Aconitum Heterophyllum.
2. Nigella Sativum.
3. Tinospora Cordifolia.
4. Berberis Aristata or Asiatica.
5. Argemone Mexicana.
6. Hydnocarpus Inebrians.
7. Urginea Indica.
8. Tribulus Terrestris.
9. Toddalia Aculeata.
10. Ailanthus Malabaricum.
11. Azadirachta Indica.
12. Semicarpus Anacardium.
13. Butea Frondosa.
14. Caesalpinia Bonducellae.
15. Myrabolans (the three).
16. Hydrocotyle Asiatica.
17. Vernonia Anthelmintica.
18. Eclipta Prostrata.
19. Picrorrhiza Kurroa.
20. Asparagus Racemosus.
21. Alstonia Scholaris.
22. Holarrhena Antidysenterica.
23. Calotropis gigantea and procera.
24. Tylophora Asthmatica.
25. Ipomoea Turpethum.
26. Adhathoda Vasica.
27. Euphorbia pilulifera.
28. Plumbago Zeylanicum.
29. Podophyllum Emodi.
30. Herpestis Monniera.
31. Phyllanthus Niruri.
32. Garcinia Morella.
33. Soymida Febrifuga.
34. Citrulus Colocynth.
35. Hemidesmus Indica.
36. Kaladana (Ipoemoea Hederacea).
37. Boerhaavia Diffusa.
38. Asteracanthus Longifolia.
39. Jatamansi (Valerian Indica).
40. Cassia Fistula.

APPENDIX No. 9.

A summary of the methods of treatment by medicated oils, etc., peculiar to Malabar and the West Coast.

It is said that Malabar vaidyans are able to cure many diseases which are considered incurable by the physicians of other parts of India and that the secret of their success is attributable to these special methods of treatment adopted by them. Of these methods one of the most important is treatment by douching or applying medicated fluids in a stream, as described below.

Douching.

Douching is done either to the scalp or to the entire body or to a limb or part of the body. For proper douching, the services of an experienced and skilful vaidyan is required and certain apparatuses are necessary. Of the latter, the two most important are—

(*a*) A wooden-plank shaped like a flat boat of proper length and breadth with raised edges, holes for the fluid to run out, handles for the patient to hold on, etc.

(*b*) A mud-pot of superior clay with a central hole at the bottom through which a wick suspended from within the pot hangs.

This arrangement is for douching on the scalp with medicated fluids. For douching over the entire body except the head two sets of 4 mud vessels with side tubules to hold the medicated fluids are required. Local douching may be carried out with a pair of pots with side tubules or with the pot arrangement for douching the head. Douching for the eye is generally done in a funnel made out of jack tree leaf with a fine hole at the bottom. The medicated fluid is placed in the vessels. The liquids generally used for douching are—

(1) Medicated oils.
(2) Milk
(3) Buttermilk.
(4) Cocoanut water.
(5) Human milk.
(6) Certain decoctions.
(7) Cold water, etc.

Of these, the most important is douching by buttermilk. The buttermilk has to be very carefully prepared from pure milk after adding certain drugs and boiling. When milk is used for douching, fresh drawn milk must be used or if that is not possible milk should be previously boiled with certain drugs. Medicated oils and clarifed butter should be made warm for douching. Certain precautions are also necessary in douching with human milk, cocoanut water, fermented rice water, decoction, etc. There are several minute details to be attended to in the proper performance of douching such as, the extent of motion to be given to the pot containing the fluid, preparation of the wick, of the oil for application to the head, and of the medicines for internal use, selection of servants, temperature of the water for bathing, etc.

Treatment by douching of the scalp is generally resorted to in cases of insanity, chronic headache, ozeana, facial paralysis, etc. Douching of the whole body is done in cases of paralysis and other affections resulting from disorders of the wind humour. Local douching is done to relieve acute and chronic inflammatory affections of the joints, certain diseases of the eyes, etc.

(b) Massage with medicated oils.

This is generally done where patients find it difficult to undergo treatment by douching on account of its expensiveness or for want of time. In this process the patient is made to lie on the special wooden plank already mentioned. The medicated oil for the scalp is then applied, and thereafter, the oil specially prepared for application to the body is warmed and applied, all over the body by four men with the aid of pads made out of rags. After this, gentle massage to the whole body is given by these men. Massage should be done in the prone, supine, and side positions and every now and then fresh warm oil should be applied during its course. Patients are generally advised to use paste of green gram for removing the oil from the body when washing after massage.

For washing the head, water in which, emblic myrabolans are boiled should be used.

Diet--chillies should be altogether avoided.

Tamarind must at least be one year old.

Salt must be pure or saindava salt must be used.

Pepper instead of chillies and ghee instead of cocoanut oil may be used.

Buttermilk is allowed.

Mutton may be used.

Fish, gingelly seeds, black gram, spirits, yam, tuberous roots, pumpkins, brinjals, drumsticks, etc., should be avoided.

Cucumber, Momordica Indica, plantains, gooseberry, green gram, and snake gourds are allowed in the form of curry. Cold water is not allowed, but water in which cyperus rotundus or ginger is boiled may be used. Exposure to heat, cold, rain, high winds and smoke must be avoided.

Another form of massage used is what is known as Navarakishi. In this process boiled medicated navarai rice is used along with warm medicated oils for massage, either in the form of pads or in the form of porridge by direct manual application. This treatment is resorted to in chronic diseases of the nervous system, paraplegia, hemiplegia, chronic rheumatism, dyspepsia and neuralgias.

Application of Medicated oils to the head.

There are four different ways in which this is carried out. First is Sirodhara which has already been described as douching or pouring in a stream of medicated oils or other fluids on the head.

Second is Sirovasthi.

Sirovasthi.

This is considered to be a very important method of treatment and is supposed to give relief in all diseases occurring in the upper part of the body caused by the derangement of the wind, humour such as headache, hemicrania, certain diseases of the eye, earache, noises in the ear facial paralysis, dryness of the mouth, dryness of the nose, giddiness and all disorders of the cerebral nerves. The process consists in applying a leather ring $4\frac{1}{2}''$ or more in breadth all round the head and fixing its lower margin to the skin by a paste of phaseolus mungosa and then filling the cavity thus formed on the top of the head with luke warm medicated oil. The oil is generelly retained till the pain is relieved or a discharge from the nose and eyes comes out. After that, the oil is removed and the head is washed with warm water. The oil has generally to be kept on the head from half an hour to one hour according to the cause of the disorder—derangement of phlegm, bile or wind.

The third form of the application is Pichu and is done by applying to the scalp cotton soaked in oil.

The fourth is called Abhyanga in which the medicated oil is simply rubbed on the head.

OFFICE OF THE HONORARY PHYSICIAN,
GENERAL HOSPITAL, MADRAS,
2nd *August* 1920.

No. 29.

From

M.R.Ry. RAO BAHADUR M. C. KOMAN AVARGAL, L.M.S.,
HONORARY PHYSICIAN, GOVERNMENT GENERAL HOSPITAL,
AND OFFICER IN CHARGE OF INVESTIGATION
INTO INDIGENOUS DRUGS,
MADRAS.

To

THE HON'BLE THE SURGEON-GENERAL
WITH THE GOVERNMENT OF MADRAS,
MADRAS.

SIR,

I have the honour to submit herewith my third report on the investigation into indigenous drugs.

Appended herewith are—

1. Single drugs investigated.
2. Compound drugs investigated.
3. Formulæ of compound preparations.
4. Summary of drugs and compound preparations investigated with index.
5. Statement showing the diseases treated.
6. List of drugs and compound preparations mentioned in the first or second report and given further trial.
7. Summarised statistics of leper patients with notes.
8. List of drugs and compound preparations, investigated from the commencement of investigation to 31st August 1920.

I have the honour to be,
Sir,
Your most obedient servant,

M. C. KOMAN,
Officer in charge of Investigation into Indigenous Drugs, Madras.

APPENDIX I.

Single drugs investigated.

1. *Anamirta cocculus*—

Natural order—Menispermaceæ.

Vernacular names—Tam., Kakka-kolli-verai; Tel., Kakkamari; Mal., Nānjin Kuru.

The seeds of this plant which are said to be deadly poisonous to the crow, fish and bugs are said to possess reputed anti-parasitic properties. An ointment containing 80 grains of finely powdered seeds to one ounce of vaseline was used as external application in ringworm. Cases of one to two months' duration were cured by a few days' application, but chronic cases did not derive benefit from its use.

Picrotoxin, a crystalline principle obtained from the seeds, is used in very minute doses by the western practitioners as a nervine tonic in epilepsy, chorea and other spasmodic diseases and also to give relief in night sweats of phthisis.

2. *Alstonia scholaris*—

This drug is considered by vaidyans to possess strong anti-malarial properties. In my last report, I mentioned that its action was very slow. On a further trial of this drug I have found that it does not possess all the virtues attributed to it in the Hindu Pharmacopœia.

3. *Aegle Marmelos (Bael)*—

Natural order—Rutaceæ.

Vernacular names—Tam., Vilva-pazham; Tel., Bilva-pandu; Mal., Vilvam.

The fruit of this tree is said to be very efficacious in cases of chronic diarrhœa and dysentery especially so in children suffering from these ailments. In cases of chronic constipation, it is said to act as a laxative. A liquid extract of this fruit was tried in several cases of dysentery and diarrhœa and found to be generally useful. A syrup of the pulp of this fruit was administered to a few cases of chronic enteritis The patients derived benefit after long continued use. The Hakims consider it as a mild intestinal stimulant and give it in chronic disorders of the intestines.

4. *Alpinia Chinensis* (Alpina galanga)—Lesser galangal.

Natural order—*Zingiberaceæ.*

Vernacular names—Tam., Chitharathai; Tel., Sanarashtram; Mal., Chithrathai.

Hakims ascribe to this drug tonic, stomachic, carminative, stimulant and aphrodisiac properties. It is generally prescribed by vaidyans in combination with liquorice, long pepper and tail-pepper in cases of bronchitis and as a stomachic tonic. A decoction of this drug was tried in several cases of bronchial catarrh with beneficial effect.

5. *Agathi Grandiflora*—

Natural order—Leguminosæ.

Vernacular names—Tam., Akathi; Mal., Agathi; Tel., Avisi.

The leaves of this plant are said to be laxative, anti-bilious and tonic. A strong decoction of the leaves was tried in several cases of constipation with little or no effect. It is said that the juice of the flowers of this plant when blown into the nostrils causes copious discharge of fluid, thereby relieving the pain and sense of weight in nasal catarrh and headache.

6. *Aristolochia Bracteata*—

Natural order—Arishtolochiaceæ.

Vernacular names—Tam., and Mal., Aduthinnaun palai; Tel., Gaddithaigadapara.

This plant is used by Hindu Physicians on account of its bitter purgative and anthelmintic properties. Bruised leaf mixed with castor oil is applied externally in obstinate cases of eczema of the legs in children. A decoction of the root 1 in 10 in doses of 1 to 2 ounces was given three times a day to suspected cases of round worms followed by castor oil and was found to be generally efficacious in expelling round worms.

7. *Aristolochia Indica*—

Natural order—Aristolochiaceæ.

Vernacular Names—Tam., Perumarindu; Mal., Eswara mulla; Tel., Eswaramulli.

In Tamil country, the vaidyans use this drug in malarial fevers. The juice of the leaves of the plant is said to be a specific antidote for cobra poisoning. The root is also used for the same purpose. The powdered root is given in honey for leucoderma. A decoction of the roots of this plant was given to cases of malarial fever; the result was unsatisfactory.

8. *Amoora Rohitaka*—

Natural order—Meliaceæ.

Vernacular names—Tam., Shem-maram ; Mal., Shem-maram ; Tel., Chawa manu.

This drug is said to have special effect on liver and spleen on account of its alterative properties. It is said to be useful in enlarged liver and spleen. In my last report I mentioned that, in the single case of enlarged spleen in which it was tried, it did not do any good. Since then this drug has been administered to cases of enlarged spleen and enlargement of liver of infants and the result was unsatisfactory.

9. *Andropogon Muricatus*—

Natural order—Gramineæ.

Vernacular names—Tam., Vettiver; Mal., Vilamicham; Tel., Vattiveru.

The roots of this plant are used in making fans and screens known as cuscus tatties. A decoction of the roots is given as a cooling drink to quench thirst in fevers. This was given to several cases of fevers and was found to possess the property of assuaging excessive thirst.

10. *Aplotaxis auriculata or Saussurea auriculata*—

Natural order—Compositæ.

Vernacular names—Tam., Koshtam ; Mal., Koshtam ; Tel, Koshtam.

Koshtam, the root of Aplotaxis auriculata, enters into several recipes or prescriptions for cough, asthma, dyspepsia, skin diseases and chronic rheumatism as it is said to possess stimulant antispasmodic and alterative properties. An infusion of the root was given to cases of chronic rheumatism as an alterative ; the result was unsatisfactory.

11. *Althæ officinalis*—

Natural order—Malvaceæ.

Vernacular names—Tukhmi-Khitmi (Hindustani).

An infusion of the flowers of this mallow was given to cases of bronchial catarrh and bronchitis, but no beneficial result was observed in any of the cases.

12. *Boerhaavia diffusa*—

This drug whose synonym '*Sothaghni*' stands for killer of dropsy is considered to be a sovereign remedy for dropsy. To verify what has been stated in my previous report, this drug was administered in the form of a liquid extract in cases of chronic Bright's disease with general dropsy. It was found to be a good diuretic, the dropsy diminishing gradually with the increase in the flow of urine.

13. *Bryonia Scabrella*—

Natural order—Cucurbitaceæ.

Vernacular names—Tam., Musimusikkayi ; Tel., Pottibudamu ; Mal., Mukkalpiram.

This drug enters into some of the compound preparations for chronic diseases in which cough is a predominant symptom probably on account of its expectorant properties. It was administered to cases of bronchitis and asthma but the action was found to be slow and unsatisfactory.

14. *Corallocarpus Epigæa or Bryonia Epigæa*—

Natural order—Cucurbitaceæ.

Vernacular names—Tam., Akasha-garudhan ; Tel., Nagadonda ; Mal.; Kadamba.

The root of this creeper is said to possess alterative and laxative properties. It is usually given in syphilitic rheumatism and later stages of dysentery. A decoction of the powdered root was given to cases of chronic mucous enteritis and dysentery. The cases of mucous enteritis derived considerable benefit from its use. The decoction did not do any good in cases of acute dysentery.

15. *Cassia occidentalis*—

Natural order—Leguminosæ.

Vernacular names—Ponnah-virai ; Tel., Kasindha ; Mal., Ponnahviram.

The whole plant is purgative, alterative and expectorant. The seeds are purgative. A decoction of the powdered seeds 1 in 10 was given in doses of ½ to 2 ounces to cases of constipation and found to act as a mild purgative.

16. *Cassia sophera*—

Natural order—Leguminosæ.

Vernacular names—Tam., Peria thagarai ; Mal., Ponnan thagarai ; Tel., Thangedu.

A decoction of the whole plant is said to be useful in diminishing urine and also to act as an expectorant. This decoction was administered to cases of acute bronchitis and was found to give relief.

17. *Carthamus tinctorius*—

Natural order—Compositæ.

Vernacular names—Tam., Chenduruk ; Mal., Chendurakam ; Tel., Kusumbha.

A decoction (1 in 20) of the powdered seeds was administered to cases of constipation. The action was very mild and in majority of cases it did not produce the desired effect.

18. *Cassia Fistula*—

Natural order—Leguminosæ.

Vernacular names—Tam., Cheru-kondrakayee ; Mal., Konna ; Tel., Kondrakayee.

The pulp contained in the pods of this tree has long been used medicinally both by the Hindu and Unani physicians as a cathartic. It is a favourite purgative drug prescribed by the Hakims and vaidyans.

A confection made up of the pulp (free from the seeds) with equal quantity of sugar was administered in doses of 2 to 4 drachms to adults and was found to possess satisfactory action as a purgative. It did not cause any irritation or discomfort to the patients.

19. *Chirata*—Andrographis Paniculata.

The properties of this drug have already been reported upon last year. A preparation of this drug in the form of an essence was obtained from Bengal Chemical Works, Calcutta and was administered to a large number of patients as a bitter stomachic tonic and during convalescence after malarial and other fevers. The essence promoted appetite and the patients felt stronger under its course.

20. *Chlorea ternatea*—

Natural order—Leguminosæ.

Vernacular names—Tam., Kodi-kakkanam ; Mal., Shankhupushpam ; Tel., Dintana.

The seeds are cathartic and the root diuretic. The powdered seeds in combination with ginger powder were found to have laxative action. Some of the patients complained of griping pain in the lower abdomen.

21. *Chavica Roxburghi or Long Pepper (Root of)*—

Natural order—Piperaceæ.

Vernacular names—Tam., Tippili ; Tel., Modi ; Malayalam, Tippali-ver.

Thippali or dried immature fruits of chavica roxburghi and pippalimoola, the sliced root of the same plant, are largely used in Hindu medicine as stimulating expectorants in chest affections and as carminative and alterative in dyspepsia and mild forms of paralysis. Hakims attribute aphrodisiacal, diuretic and emmenagogue properties to them. They also consider them as resolvent of enlarged liver and spleen. These drugs in the form of decoction were extensively used in acute and chronic bronchitis attended with cough and were found to give gradual relief in all such cases.

22. *Cæsalpinia sappan (Sappan wood)*—

Natural order—Leguminosæ.

Vernacular names—Tam., Vartangi ; Mal., Chappangam ; Tel., Bukkapu Chettu.

Sappan wood is largely used as a dyeing agent and very large quantities are consumed in the preparation of gulal, the red powder with which Hindus coat themselves at the time of the holy festival. A decoction of the wood is said to be very useful in curing dysentery and diarrhœa. I have given it an extended trial and found to give relief in mild cases of dysentery and diarrhœa.

23. *Coccinia Indica*—(Cephalandra Indica).

Natural order—Cucurbitaceae.

Vernacular names—Tam., Kovai ; Tel., Dondatiga or Kakidonda ; Mal., Kova.

The leaves of this plant are boiled in gingelly oil and applied externally in ringworm psoriasis, itch, etc. The oil is also used as an application for ulcers, and as an injection into chronic sinuses. Internally the decoction of the leaves and stem is said to be expectorant, antispasmodic and useful in bronchial catarrh and bronchitis. I have not found either in the oil or the decoction any of the properties mentioned above.

24. *Cordia Myxa*—

Natural order—Boragineæ.

Vernacular names—Tam., Perianaru valli ; Mal., Naru-vari ; Tel., Nakkeru chettu.

Demulcent, said to be useful in bronchial affections and in irritation of the urinary passages. A decoction of the fruit was administered to cases of bronchitis with negative result.

25. *Cassia alata (Ringworm shrub)*—

Natural order—Leguminosae.

Vernacular names—Tam., Sheema agathi; Mal., Sheema agathi; Tel., Sheema avisi.

The paste of the leaves was used as an external application in several cases of ringworm of the body and was found to be efficacious in recent cases but in chronic cases the drug failed to bring about a cure.

26. *Emblic myrabolans*—

Natural order—Euphorbiacea.
Vernacular names—Tam., Nellikayi; Mal., Nellikayi; Tel., Usarikayi.

In my preliminary report, I have mentioned about this drug being one of the constituents of 'Triphala' or the three myrabolans which are employed in a large number of diseases both by Ayurvedic and Unani Physicians. This myrabolan is prescribed by them largely in dyspepsia and bilious headache

Vaidyans ascribe cooling properties to it. In chronic headache, biliousness and in menta excitement, water in which these beleric myrabolans are boiled over night is used th following morning, for douching the head to produce cooling effect on the brain. There is no doubt, head baths given in this manner for a number of days produces gradual lessening of the excitement. But whether the effect produced is the result of the myrabolans or the cold water, I am unable to say. The moraba or preserve of the pulp of these myrabolans is generally used by Hakims in palpitation of the heart, biliousness and dyspepsia. In some of these cases the drug has been found to give relief. These myrabolans are considered to possess refrigerant, diuretic and laxative properties. In Hindu houses, when the fruits are available in quantity, they are made into pickles and eaten with food to stimulate the appetite.

27. *Euphorbia neriifolia*—
Natural order—Euphorbiaceae.
Vernacular names—Tam., Ilai-kalli; Mal., Ilai-kalli; Tel., Akujemudu.

The white milky juice of this plant is a purgative and expectorant. For purgative action it is administered internally by soaking other purgatives in it so that by absorption of the juice, their purgative properties may become increased. A succus consisting equal parts of the juice of this plant and simple syrup was prepared and administered in doses of 10 to 20 minims three times a day in cases of asthma and was found to give relief to the fits of that disease.

28. *Eurycoma longifolia*—

Natural order—Simarubeae.

Vernacular names—Tam., Usi-thagarai; Tel.? Mal.?

This small plant is a native of the Malayan Peninsula. The root of this plant is said to be a specific in malarial fever next only to quinine. A decoction of this drug 1 in 10 in ½ to 1 ounce doses was administered to mild cases of malarial fever and was found to be useful in those cases.

29. *Erythrina indica*—

Natural order—Leguminae.

Vernacular names—Tam., Kaliyana murukka; Tel., Badithapu chettu; Mal, Kalyana murukku.

The leaves and the bark of this plant are used as febrifuge. The leaves are crushed and applied to rheumatic joints to relieve pain. The Tamil vaidyans use the juice of the leaves mixed with castor oil for the cure of acute or chronic dysentery. Equal quantities of the juice of the leaves and castor oil in drachm doses three times a day were given to about half a dozen cases of acute dysentery without any benefit.

30. *Eugenia jambolans*—

Natural order—Myrtaceae.

Vernacular names—Tam., Naval; Mal., Naval; Tel., Neredu.

The bark and the fruit of this plant are astringent. A decoction of the bark and the confection of the fruits are said to be useful in acute and chronic dysentery. Several mild cases of dysentery were cured by the administration of the decoction, but in acute and severe cases more powerful remedies had to be substituted.

31. *Fumaria parviflora*—
Natural order—Fumariaceae.
Vernacular names—Tam., Thura; Tel., Chatharasi.

This plant is said to possess the properties of taraxacum. It is used also as an alterative, aperient and antifebrile drug. Decoctions of the entire plant was given to cases of mild pyrexia and the result was unsatisfactory.

32. *Hemidesmus indicus* (*Sarasaparilla*)—

Natural order—Asclepiadacoe.

Vernacular names—Tam., Nannari; Mal., Nannari; Tel., Sugandhipala.

Sarasaparilla is considered by vaidyans to possess blood purifying, alterative and tonic properties to a considerable extent. A liquid extract of the drug was given as a tonic in skin diseases and as an alterative in chronic rheumatism. The action was found to be very slow in the few cases that improved under it.

33. *Holarrhena-antidysenterica*—

The properties of this drug have already been reported upon. This drug which is con sidered to be the principal medicine for dysentery in Hindu medicine was given a further extended trial. In the dysentery of children in doses of 15 to 30 drops and in that of adults in doses of 1 to 2 drams, the liquid extract gave very satisfactory result in almost every case.

34. *Hyssopus officinalis*—

Natural order—Labiatae.

Vernacular names—Hindustani—Zupha.

This is said to possess diaphoretic, expectorant and stomachic properties and to be useful in asthma, chronic bronchitis, amenorrhoea and sorethroat. A decoction of the flowers of this plant from Persia was given in cases of asthma and chronic bronchitis and found to be a useful remedy in those complaints. (Vide notes in my first report for a compound preparation of the drug.)

35. *Indigofera aspalathoides* –

Natural order—Leguminosae.

Vernacular names—Tam., Shivanar vembu; Mal.; Manali.

This is one of the important ingredients of the specific oil for syphilitic and other skin diseases. A decoction of the entire plant is given as an alterative in secondary syphilis, psoriasis etc.; on a trial of the decoction, I did not find it to possess any of the properties attributed to it.

36. *Luffa amara*—

Natural order—Cucurbitaceae.

Vernacular names—Mal., Athanga; Tel., Chedhu beera; Tam., peybeeraka.

The entire plant is said to possess laxative and purgative properties and is also said to be useful in skin diseases and asthma. It is said to be an antidote to snake-poisoning. A decoction of 1 in 10 was administered to cases of asthma and was found to give relief in that disease by producing copious expectoration

37. *Michelia champaca*—

Natural order—Magnoliaceae.

Vernacular names—Tam., Shampangi; Tel., Sampangi; Mal., Champakam.

The bark of this tree is said to possess alterative, stomachic and emmenagogue properties. A decoction of the bark 1 in 20 was tried in half to 1 ounce doses in mild cases of chronic gastritis. After using it for several days, the patients obtained considerable relief from the pain and discomfort in the epigastrium with which they were troubled but none of the cases was completely cured.

38. *Mesua Ferrea*—

Natural order—Guttiferai.

Vernacular names—Tam., Cheru-naagapu; Tel., Naga kesara; Mal., NagaChambagam.

The unripe fruits of this plant are aromatic and sudorific. The flower buds are used in dysentery. A syrup of flower buds 1 in 10 was used in acute cases of dysentery in the out-patient department; mild cases were cured by its use but in very acute and severe cases, it was found to be inefficacious.

39. *Melia asadirachta*—

A further trial was given to neem in the form of an essence in doses varying from 1 to 10 drops in water in chronic skin diseases such as itch, boils, eczema, the drug improved the general condition of the patients and thereby indirectly assisted other methods of treatments adopted in those diseases.

40. *Mallotus philippensis*—

Natural order—Euphorbiaceae.

Vernacular names—Tam., Kopila-podi; Mal., Poonagam; Tel., Bendaruppu.

This granular brick red powder consisting of small glands covering the ripe fruit, is said to be an anthelmintic in cases of thread and round worms and a purgative. It was tried in the form of a liquid extract in doses of 1 to 3 fluid drachms every 3 hours until three doses were administered A purgative of castor oil was given thereafter. It was found to be efficacious in expelling round and thread worms.

41. *Malva sylvestris*—

Natural order—Malvaceæ.

Vernacular names—Persi, Kitmii-kuchak.

This mallow is said to possess mucilaginous, demulcent and cooling properties. It is used in affections of the mucous membrane of the pulmonary tract and of the urinary bladder. It was given a fair trial in bronchial catarrh and bronchitis but the result was disappointing.

42 *Melia azadarach*—

Natural order—Meliaceæ.

Vernacular names—Tam., Malai-veppam; Mal., Malai-vembu; Tel., Kondavepa-chettu.

A decoction of the bark of this jungle neem was used as a bitter tonic and anti-periodic in dyspepsia and malarial fevers respectively. It was found to be an efficient bitter tonic but had no anti-malarial properties.

43. *Nelumbium speciosum*—

Natural order—Nymphoeacea.

Vernacular names—Tam., Thamarai; Tel., Thamara; Mal., Thamarapu.

The seeds of this aquatic shrub are said to be demulcent and nutrient. The flowers are said to be cooling, astringent, and expectorant. A syrup of the dried flowers was used in ½ ounce doses and was found to be efficacious in curing mild cases of dysentery.

44. *Oldenlandia herbaceae*—

Natural order—Rubiaceæ.

In addition to a liquid extract, a decoction of this drug 1 in 10 was tried in mildcases of malarial fever of a low remittent type and was found to do good in a few of those cases. This drug enters into the combination of several decoctions for fevers mentioned in Sanskrit medical works.

45. *Oldenlandia Umbellata*—

Natural order—Rubiaceæ.

Vernacular names—Mal., Chaya-ver. Tam., Imbura ver or chiru ver; Tel., Chiru-veru.

The leaves and root of this plant are considered to possess strong expectorant property and are prescribed in cases of bronchial catarrh, bronchitis and asthma. A decoction of the root 1 in 10 was given in doses of ½ to 1 ounce a day to cases of bronchitis and asthma. In the former disease, the patients were cured after a few days use of the decoction but in the latter, the drug gave only temporary relief

46. *Odina wodier*—

Natural order—Anacardiaceae.

Vernacular names—Tam., Odiyamaram; Mal., Udhimaram; Tel., Oddimanu.

The bark of this tree is very strongly astringent and is recommended for dysentery and diarrhœa. A decoction of the bark 1 in 10 was administered in one ounce doses to cases of diarrhœa and dysentery and the result was very unsatisfactory.

47. *Pistia stratioites*—

Natural order—Aroidæe.

Vernacular names—Tam., Akasa Tamarai; Tel., Anthara thamara; Mal., Akasatha-marai

This drug is recommended for external application and internal use in weeping ulcers, eczema and leprous ulcers. An oil was prepared by boiling the juice of the leaves in cocoanut oil and used externally in chronic skin diseases. Relief was obtained in a number of cases.

48. *Psoralia corylifolia*—

Natural order—Leguminosæ.

Vernacular names—Tam., Karpokkarishi; Tel., Bawuchee; Mal., Karpokkari.

The seeds of this plant are used by the vaidyans for cure of leucoderma and also to give relief in leprosy. A tincture and an oleate of Bawuchee are sold by druggists in the shops. Powdered seeds were given internally to a case of leucoderma along with the application of oleate of Bawuchee to the affected parts. In the course of a few days the patches showed signs of redness from congestion but the gastrointestinal tract was so much irritated that the patient refused to undergo further treatment. I have administered the tincture along with the external application of Bawuchee in a few cases of leucoderma without any benefit. A compound ointment of the powdered seeds of psoralia corylifolia and the seeds of cassia tora with lime juice was tried in cases of ringworm with marked beneficial results.

49. *Pinus Deodara*—

Natural order—Coniferæ.

Vernacular names—Tam., Devadaran; Mal., Devadaram; Tel.,Devadara.

It is considered to posssss diaphoretic, diuretic and carminative properties and to be useful in fevers, flatulence and urinary disorders. A decoction of this drug was administered to cases of chronic fevers and the result was unsatisfactory.

50. *Plantago ispaghula*—

Natural order—Plantagineæ.

Vernacular names—Tam., Iskol-verai; Tel., Ispagula-vithulu. Mal., Isphagul.

Isphagul seeds have demulcent and diuretic properties and are generally used in inflammatory conditions of the mucous membrane of gastro-intestinal and genito-urinary tracts. They are generally given in the water of tender cocoanuts. The seeds were given in the form of an infusion in cases of specific urethritis and found to relieve considerably the burning and irritation accompanying the disease.

51. *Rhus succedanea*—

Natural order—Anacardiaceæ.

Vernacular names—Tam., Karkatashringi; Mal., Karkatasringi; Tel., Karkatashringi.

Karkatashringi or what is known in Tamil as karkapu consists of thorn-like excrescences caused by insects on the branches of Rhus succedanea. The drug is considered to be tonic, expectorant, and astringent. It was given to infants suffering from diarrhoea and dysentery, and was found to be an efficient astringent in such cases. Many cases were cured by its administration.

52. *Saraca Indica*—

Natural order—Leguminosæ.

Vernacular names—Tam., Ashogam; Tel., Asoka; Mal., Asshogam.

This is considered to be an excellent uterine tonic by the vydians and it is specially recommended in menorrhagia and leucorrhoea. It is supposed to act as a prophylactic against all uterine disorders. A liquid extract of the bark of this plant which is strongly astringent was administered to cases of menorrhagia and found to do considerable good. The action was slow. It took on an average three days to produce the desired effect.

53. *Scindapsus pertusa*—

Natatural order—Aroideæ.

Vernacular names—Tam., Atti-tippli; Mal., Atti-tippili, Tel, Gajja-pippali.

The fruit of this plant is considered to be carminative, stimulant and to be useful in diseases caused by the derangement of phlegm humour such as diarrhoea, asthma. A decoction of the sliced fruit of this plant was tried in cases of asthma and found to act as an expectorant; it did not diminish the severity of the fit.

54. *Smilax Chinensis*—

Natural order—Smilaceæ.

Vernacular names.—Tam., Paranki-pattai; Mal., China-paivu; Tel., Parangi-Chekkai.

Ther use—Diaphoretic, stimulant and alterative; useful in rheumatism, epilepsy, scrofula and tertiary syphilis.

The decoction of this drug in doses of ½ to 1 ounce was tried in cases of chronic and subacute rheumatism with unsatisfactory results.

55. *Soymida febrifuga*—

Natural order—Meliaceæ.

Vernacular names—Tam., Shemmaram; Tel., Somida-manu.

The bark of this tree is said to be a bitter tonic and a good anti-malarial like cinchona. A decoction of the bark 1 in 20 was given in one ounce doses three times a day in cases of malarial fever and found to be beneficial. The action was not only very slow but very inferior to that of the alkaloids of cinchona.

56. *Sphaeranthus Hirtrus or Indicus*—

Natural order—Compositæ.

Vernacular names—Tam., Kottak Korandai; Tel., Bodasoram; Mal. Adakkamanian.

This small plant was used in the form of a decoction as a diuretic in urethritis. The seeds of the plant are said to be anthelmintic. The paste of the root bark when applied locally is said to give relief, in cases of bleeding piles. This drug was administered in the form of decoction in cases of specific urethritis. The result was unsatisfactory.

57. *Solanum ferox*—

Natural order—Solanaceæ.

Vernacular names—Tam., Ana-chundai; Mal., Vellothuvazhutina; Tel., Molakkayi.

This is one of the ingredients of Dasamoola and is generally prescribed for fevers in which bile humour is at fault. A decoction of the entire plant was administered to cases of different varieties of fevers; the drug was not found to possess any diaphoretic or antipyretic action.

58. *Solanum trilobatum or trifoleatum*—

Natural order—Solanaceæ.

Vernacular names—Tam., Tutuvelai ; Tel., Mundlamushti ; Mal., Tutavalam.

The leaves, seeds and flowers of this plant are said to be useful in the form of a decoction in relieving the cough of consumption and bronchitis. It enters into the composition of compound medicines for chronic bronchitis. A decoction of the entire plant 1 in 10 was administered to cases of acute and chronic bronchitis and was found to be useful in those diseases. This is considered to be a home remedy for all kinds of cough.

59. *Solanum Indicum*—

Natural order—Solanaceæ.

Vernacular names.—Tam., Karimulli ; Tel., Thella mullaka ; Mal., Cheru-chunda-cheruvazhudhena.

This is one of the ingredients of the ten roots (dasamoola). It is said to possess diaphoretic, diuretic and expectorant properties. Its root enters into the composition of several compound decoctions for fevers, cough and dysuria. A decoction of the root of this plant was given to cases of bronchitis attended with fever ; the result wss unsatisfactory.

60. *Solanum jacquini*—

Natural order—Solanaceæ.

Vernacular names—Tam., Kandankathiri ; Mal., Kantakari ; Tel., Nela-mulaka.

This drug is said to be useful in cough, asthma, sore-throat etc. A decoction of the entire plant was administered to cases of asthma and bronchitis without any appreciable benefit.

61. *Terminalia Arjuna*—

The bark of this tree is considered invaluable in heart diseases, where combined stimulant and tonic action is necessary. It is also recommended in dropsy arising from heart troubles. I have reported unfavourably about the efficacy of this drug in heart cases in my previous report. A further trial was given to this drug in the form of a liquid extract in six cases of valvular diseases of the heart with failure of compensation. The patients did not derive any benefit from its use.

62. *Tinospora cordifolia*—

Since submitting my last report, this drug was given another fair trial in the form of a liquid extract in several cases of malarial fever both in children and adults. Its action was found to be very slow. The drug had to be administered for several days before even mild cases were cured. In chronic cases, it did not do any good, although it is a reputed medicine in the Hindu Pharmacopœia for all fevers.

63. *Tephrosia purpurea*—

Natural order—Leguminosæ.

Vernacular names—Tam., Kollukkayi-velai ; Tel., Vempali/; Mal., Kozhinhil.

This drug is said to be useful in cough and in derangement of the kidneys. A decoction of the drug 1 in 10 was administered in one ounce doses to cases of Bright's disease with dropsy, and found to possess diuretic properties in a mild degree

64. *Tylophora asthmatica* (Country Ipecacuanha)—

Natural order—Asclepiadeæ.

Vernacular names.—Tam., Nayi palai ; Mal., Valli pala ; Tel., Veri-pala.

The leaves and the root bark of this plant are said to possess emetic, diaphoretic, and expectorant properties just like the ipecacuanha of the British Pharmacopœia. Its use as a substitute for ipecac in the treatment of dysentery and its value as an emetic were well known to the early European practitioners of India. A decoction of the leaves 1 in 10 and infusion of the root bark are generally used for these purposes. I have used this drug in cases of dysentery, asthma and bronchitis and found it to give satisfactory results in those diseases.

65. *Tragia cannabina*—

Natural order—Euphorbiaceæ.

Vernacular names—Tam., Cheru kanjuru ; Mal., Cheru kodithuva ; Tel., Doolagœndi.

The root of this plant has diaphoretic property and is therefore given in fevers to cause perspiration. A decoction of this root 1 in 10 was found to be useful in relieving bronchitis and the attendant fever.

66. *Vernonia anthelmintica*—

Natural order—Compositæ.

Vernacular names—Tam., Kattu-shiragam ; Mal., Katu-jeerakam ; Tel.. Adivi-jeelakara.

To confirm what I have stated in my previous report, a good sample of this drug was obtained from Zandu Pharmacy, Bombay, and given a fair trial in cases of round worms, in doses of 20 to 60 grains ; the result was completely satisfactory.

APPENDIX II.

Compound drugs investigated.

ARISHTAS.

1. *Abahya Arishtam*—
Composition—vide prescription No. 1.
Dose—½ to 1 ounce.
Ther. use—In piles, indigestion, ascites, enlarged spleen and habitual constipation.

This fermented compound decoction of chebulic myrabolans was given to cases of atonic dyspepsia and constipation, the effect was very slow and the result was not satisfactory.

2. *Pippali Arishta*—
Composition—vide prescription No. 2.
Dose—½ to 2 tolas twice a day.
Ther. use—Useful in asthma, cough and piles, etc.

. This fermented decoction was administered to patients suffering from bronchitis and asthma and found to give them relief very slowly.

ASAVAS.

3. *Kanaka Asava*—
Composition—vide prescription No. 3.
Dose—½ to 2 tolas twice a day after meals.
Ther. use—Expectorant and antispasmodic; said to be useful in asthma and phthisis.

Asthmatic patients generally derived much benefit from its use for a week or two.

4. *Kumari Asava* (fermented decoction of aloe vera)—
Composition—vide prescription No. 4.
Dose—½ to 2 tolas twice a day after meals.
Ther. use—Alterative and antispasmodic; said to be useful in asthma, colic, flatulence and chronic constipation.

This asava containing about 70 drugs was administered to several cases of asthma and was found to produce very beneficial effect on the disease.

AVALEHAS, GRITHAMS, SYRUPS AND CONFECTIONS.

5. *Asoka Ghritham*—
Composition—vide prescription No. 5.
Dose—¼ to 1 tola to be taken twice a day.
Ther. use—Useful in leucorrhœa and menorrhagia.

The bark of this drug is reputed in ayurveda to be a specific in all uterine affections especially in menorrhagia. This compound ghee was administered to several cases of menorrhagia with marked beneficial effect in checking hæmorrhage in cases of menorrhagia and metrorrhagia.

It was also given in cases of leucorrhœa with very satisfactory results.

6. *Annosh-daroo*—
Composition—vide prescription No. 6.
Dose—¼ to ¾ tola two or three times a day.
Ther. use—Said to improve digestion.

This confection was given to cases of atonic dyspepsia with loss of appetite and was found to do good to those cases.

7. *Agasthya Rasayanam*—
Composition (vide prescription No. 7).
Dose—1 to 2 tolas twice a day or two myrabolans daily.
Ther. use—Useful in general debility, chronic bronchitis, cough, consumption, etc.

This confection is said to have been prepared first by saint Agasthya—hence it name; it was administered to long-standing cases of chronic bronchitis associated with asthma and emphysema and was found to be beneficial in all such cases. There was marked decrease in the cough and hard breathing and the patients generally gained strength.

8. *Confection Dhaiphal* (woodfordia floribunda)—
Composition—vide prescription No. 8.
Dose—1 to 2 drs.
Ther. use—Stimulant and astringent.

This compound confection gave satisfactory result in dysentery. It is said to be useful in checking hæmorrhages and discharges like menorrhagia and leucorrhœa.

9. *Dhatryavaleha* (compound confection of Emblic myrabolans)—
Composition—vide prescription No. 9.
Dose—¼ to 1 tola to be taken with milk twice a day.
Ther. use—Stimulant and expectorant; said to be useful in cough and bronchitis.

This confection was administered to cases of chronic bronchitis and was found to give relief.

10. *Dava-ul-musk*—

Composition—vide prescription No. 10.

Dose—⅛ to ½ tola to be taken twice a day with milk.

Ther. use—Gives strength to the cardiac muscles, useful in functional affections of the heart. Also strengthens the central nervous system.

This confection whose important ingredients are pearls, amber, silk-cocoons, silver leaves, and musk is no doubt a nervine tonic. This was given to a patient suffering from neurasthenia in ¼ tola doses. It did give tone to the nerves of the patient but the effect was very gradual.

11. *Gulgulu thikthakam*—

Composition—vide prescription No. 11.

Dose—½ to 1 ounce.

Ther. use—Useful in leprosy and other skin diseases, scrofula, piles, diabetes, consumption, ozena, heart disease, anæmia, asthma, etc.

This medicated ghee was administered to cases of chronic psoriasis and the patches gradually disappeared.

12. *Jawarish-ai-amela*—

Composition—vide prescription No. 12.

Dose—½ to ¾ tola two or three times a day.

Ther. use—Said to improve digestion; useful in stomatitis; removes excess of heat from the body.

This confection, whose chief ingredient is phyllanthus emblica, is said to be useful in diseases of the digestive system such as stomatitis, gastritis, atonic dyspepsia. In all these conditions, the confection was found to give relief and to generally improve the appetite.

13. *Jawarishai sulaimani*—

Composition—vide prescription No. 13.

Dose—½ to ¾ tola three times a day.

Ther. use—Useful in diarrhœa, dyspepsia, indigestion, etc.

This confection whose chief ingredients are carminative drugs like cumin seeds, menthæ sativum, pepper, cinnamon and ginger is said to do good in diarrhœa, dyspepsia, heart burn, indigestion and vomiting. This was given as an appetizer and for improving digestion in cases of atonic dyspepsia. In these cases it acted like the carminative mixture of the hospitals.

14. *Jawarishai-Thurush*—

Composition—vide prescription No. 14.

Dose—¼ to ½ tola twice a day.

Ther. use—Useful in cases of indigestion due to acidity of the stomach.

This confection was found useful in giving relief in chronic gastritis and in atonic dyspepsia. It increased appetite to a marked degree.

15. *Kantakari Avaleha* (compound confection of solanum zanthocarpum)—

Composition—vide prescription No. 15.

Dose—½ to 2 tolas to be taken with milk.

Ther. use—Expectorant, diuretic and aperient.

This confection was administered to patients suffering from asthma and bronchitis and found to be very useful in those diseases.

16. *Khamirai Abrasham*—

Composition—vide prescription No. 16.

Dose—¼ to ½ tola.

Ther. use—Useful in all cardiac affections. Palpitation is effectively relieved. It is also a good nervine tonic.

From the nature of the ingredients (gold leaf, silver leaf, pearl, ruby, silk-cocoons, valerian, etc.) it can easily be inferred that this compound confection must be a powerful nervine tonic. It was given to cases of nervous palpitation. Although the general condition of the patients improved, the confection did not do any good to palpitation.

17. *Laboobai Sagheer*—

Composition—vide prescription No. 17.

Dose—½ to 1 tola with two or three ounces of milk.

Ther. use—Useful in polyuria due to kidney affection, increases and thickens the semen. Builds up the nervous tissue and also the kidney tissue.

This confection was given to patients suffering from neurasthenia and nervous debility, the patients did not derive any benefit even after protracted use.

18. *Mamsa sarpishi*—

Composition—vide prescription No. 18.

Dose—½ to 1 ounce.

Ther. use—In insanity, epilepsy and lethargy.

This was administered to a case of epilepsy for a number of days; the patient did not derive any benefit.

19. *Majoonai Mussafi*—
Composition—vide prescription No. 19.
Dose—$\frac{1}{4}$ to $\frac{3}{4}$ tola twice a day.
Ther. use—Purifies the blood, relieves constipation, cures chronic ulcers and other skin affections.

This was tried in habitual constipation and skin diseases like psoriasis and itch. It did not do any good in those affections.

20. *Majoonai sual*—
Composition—vide prescription No. 20.
Dose—$\frac{1}{2}$ to 1 tola twice a day.
Ther. use—Said to be an expectorant and useful in bronchitis.

This confection was found useful in cases of bronchial catarrh and mild cases of bronchitis.

21. *Majoonai malarial fever*—
Composition—vide prescription No. 21.
Dose—$\frac{1}{4}$ to $\frac{1}{2}$ tola twice a day.
Ther. use—Said to be useful in malaria and by long continued use said to bring about reduction of enlarged spleen.

This confection was tried in several cases of malarial fever, the patients did not derive benefit from its use.

22. *Mahatiktha Ghritham*—
Composition—vide prescription No. 22.
Dose—$\frac{1}{2}$ to 2 tolas to be taken twice a day.
Ther. use—Bitter tonic and alterative, useful in chronic skin diseases and leprosy.

This ghritham was given to cases of chronic psoriasis. Patients derived benefit from its use; the patches became thin and gradually disappeared.

23. *Majumi-e-tel*—
Composition—vide prescription No. 23.
Dose—1 to 4 drs. twice or thrice a day.
Ther. use—Useful in dyspepsia, congestion of liver and anorexia.

The bark of prunus pudum is said to possess bitter tonic and sedative properties. The compound confection majumi-e-tel whose chief ingredients are prunus pudum, valerian, nutmeg, long pepper, cubebs, etc., was administered to cases of painful dyspepsia and was found to be unsatisfactory.

24. *Madhusnuhi Rasayanam*—
Composition—vide prescription No. 24.
Dose—$\frac{1}{4}$ to 1 tola in milk.
Ther. use—Restores loss of appetite and taste, useful in consumption, diabetes, abdominal disorders, skin diseases, nervous debility, etc.

This rasayanam was administered to cases of chronic psoriasis. After continued use, the patches became thin and gradually disappeared.

25. *Neelini Ghritham*—
Composition—vide prescription No. 25.
Dose—$\frac{1}{2}$ to 1 ounce.
Ther. use—Useful in colic, abdominal pains, enlarged spleen, ascites, etc.

This was given to cases of dysmenorrhoea, the result was unsatisfactory.

26. *Panchagaviya Ghritham*—
Composition—vide prescription No. 26.
Dose—$\frac{1}{2}$ to 1 ounce.
Ther. use—In insanity, epilepsy and lethargy.

This medicated ghee was given to a case of epilepsy for a few weeks; there was not the slightest improvement noticed.

27. *Syrupus Hyssopus officinalis* (compound syrup of zupha)—
Composition—vide prescription No. 27.
Dose—$\frac{1}{2}$ to 1 ounce twice a day.
Ther. use—Carminative, diaphoretic and emmenagogue.

This syrup was administered to cases of dyspepsia, chronic bronchitis, and asthma. It gave relief to those cases. It is also said to be useful in amenorrhoea. On trial it did not give satisfactory result in this disorder.

28. *Syrup Brahmi*—
Composition—vide prescription No. 28.
Dose—1 to 2 drs. twice after meals.
Ther. use—Useful in hysteria, epilepsy, insanity and mental derangements, also useful in hoarseness and for improving the voice.

This drug was given a further trial in the form of syrup to cases of epilepsy ; the intervals of the occurrence of fits became longer after its continued use but in no case there was complete cure (vide herpestis monnieria in report II).

BHASMAMS.

29. *Abrak bhasmam* (talc calcined 1,000 times)—
Composition—vide prescription No. 29.
Dose—2 to 6 grains to be taken twice a day in honey.
Ther. use—Useful in phthisis and debility of old age, gives strength to the body.

This was given to two cases of diabetes and found to give temporary relief; the quantity of sugar gradually decreased under its use; but in both cases there never was complete disappearance of the sugar from the urine.

30. *Naga bhasmam* (calcined zinc).
Composition—vide prescription No. 30.
Dose—½ to 2 grains.
Ther. use—Said to be useful in urinary disorders.

It was given to cases of gonorrhoea ; the result was unsatisfactory.

31. *Thalaka bhasmam* (calcined yellow orpiment)—
Composition—vide prescription No. 31.
Dose—½ to 2 grains.
Ther. use—Useful in cough, bronchitis and fever. This bhasmam was given to cases of bronchitis attended with fever and was found to have beneficial effect.

32. *Sringa bhasmam*—
Composition—vide prescription No. 32.
Dose—6 to 12 grains.
Ther. use—Useful in gonorrhœa and urethritis.

This bhasmam prepared out of hart's horn is said to have a sedative and soothing effect on the inflamed mucous membrane of the urethra. It was tried in cases of specific urethritis but the effect was disappointing.

33 *Vanga bhasmam*—
Composition—vide prescription No. 33.
Dose—2 to 6 grains.
Ther. use—In gonorrhœa, calculus and other urinary diseases.

This preparation was found to bring about a cure in acute specific urethritis. There is no doubt from what I have seen that in acute gonorrhoea it has the power of destroying gonococci when internally administered.

34. *Yesada bhasmam*—
Composition—vide prescription No. 34.
Dose—1 to 3 grains.
Ther. use—Dyspepsia, stomachache and urinary diseases.

This bhasmam, which is said to have been prepared from zinc, was given in two cases of chronic gastritis and was found to give relief to the symptoms in both those cases.

CHURNAMS.

35. *Bhoonimbadi churna* (compound powder of Chirata, Picrorrhiza, etc.)—
Composition—vide prescription No. 35.
Dose—20 to 60 grains to be taken three times a day.
Ther. use—Bitter tonic, antiperiodic and gastric stimulant.

This compound powder was administered to cases of chronic diarrhoea, dysentery, chronic gastritis and as a stomachic tonic to cases of anorexia after fevers. It was found useful in these diseases but the action was very slow.

36. *Chaturooshana churna*—
Composition—vide prescription No. 36.
Dose—10 to 60 grains twice a day.
Ther. use—Said to be useful in colic, and flatulence ; cough and coryza.

This is a compound preparation containing chavica rox-burghi, piper nigrum, dry ginger and root of chavica rox burghi. This was given to patients with flatulence and intestinal colic and was found to be useful in those cases.

37. *Jatipaladhy churnam* (compound powder of Nutmeg)—
Composition—vide prescription No. 37.
Dose—12 to 24 grains twice a day in honey.

Ther. use—This powder is said to be useful in headache, asthma, colic, neuralgia, acute mania, menorrhagia and dysmenorrhoea.

It was administered to cases of asthma, lumbago and menorrhagia and was found to yield satisfactory results.

38. *Katphaladhi churnam*—
Composition—vide prescription No. 38.
Dose—½ to 1 dram twice a day in honey.
Ther. use—Stimulant, astringent and diaphoretic; useful in fevers, diarrhoea and dysentery.

This powder was given to cases of dysentery and the patients derived benefit from its use.

39. *Kapithashtak churnam*—
Composition—vide prescription No. 39.
Dose—10 to 40 grains to be taken before meals with water.
Ther. use—Said to act as a good astringent, stomachic and stimulant.

This compound preparation was found useful in acute dysentery and diarrhœa.

40. *Madanadhivaman* (compound powder of Randia Dumetorum).
Composition—vide prescription No. 40.
Dose—20 to 60 grains as an emetic, 5 to 15 grains as an expectorant.
Ther. use—Expectorant and emetic; said to be useful in bronchitis and chest affections.

The fruit of Randia Dumetorum is one of the principal emetics in the Indian Pharmacopœia. This compound powder was given as an emetic in acute cases of bronchitis and asthma and by producing emesis, it gave much relief in acute bronchitis and asthma. The powder has also strongly marked expectorant properties.

41. *Pulv. Smilax Officinalis Co.* (Anti-rheumatic unani powder)—
Composition—vide prescription No. 41.
Dose—¼ tola to be taken twice a day in cold water.
Ther. use—Said to be useful in rheumatism and syphilis and is considered a good blood purifier.

This powder was tried in cases of chronic rheumatism without any benefit.

42. *Narisimha churnam* (compound powder of the three myrabolans, the three acrids, etc.)—
Composition—vide prescription No. 42.
Dose—10 to 40 grains twice a day in honey.
Ther. use—This powder is said to possess stimulant, tonic and alterative properties; said to be useful in sexual debility, neuralgia and dyspepsia.

It was administered to cases of myalgia and atonic dyspepsia and was found to give relief.

43. *Pushyanuga churnam*—
Composition—vide prescription No. 43.
Dose—20 to 60 grains twice a day.
Ther. use—Alterative, tonic and astringent.

This compound powder was given to several cases of menorrhagia and leucorrhoea and generally found to give relief in such cases.

44. *Pancha Kola churnam*—
Composition—vide prescription No. 44.
Dose—10 to 30 grains twice a day.
Ther. use—Said to be a good appetizer; used in dyspepsia, cough, flatulence and enlarged spleen.

This compound powder which is considered to be a good appetizer, expectorant and antispasmodic, was tried in cases of atonic dyspepsia, bronchial catarrh and bronchitis and was found to give relief gradually in those cases.

45. *Panchanimba churnam*—
Composition—vide prescription No. 45.
Dose—5 to 20 grains thrice a day.
Ther. use—Said to be useful in malarial fever during convalescence.

This compound powder is said to be a good tonic and is given to patients convalescing from malarial fever. This powder not only increased the appetite of the patients but also acted as a general tonic.

46. *Saffu-fai-siah*—
Composition—vide prescription No. 46.
Dose—5 to 10 grains in honey twice a day.
Ther. use—Said to be useful in dysentery.

This compound powder proved efficacious in cases of acute dysentery.

47. *Shringyadhi churnam* (compound powder of Rhus succedanea)—
Composition—vide prescription No. 47.
Dose—1 to 4 grains in honey three times a day.
Ther. use—Gastric stimulant, astringent and alterative; useful in infantile diarrhoea, bronchitis and gastro-intestinal troubles during teething.

This powder was administered to infants suffering from diarrhoea resulting from teething and other causes and to infants with bronchial troubles. Many of the little ones were very much benefited by it.

48 *Suravadhi churnam*—
Composition—vide prescription No. 48.
Dose—10 to 30 grains twice a day.
Ther. use—Said to be useful in piles and dysentery.

This powder did not do the slightest good to cases of dysentery.

49. *Shadushana churnam* (compound powder of six acrids and pepper)—
Composition—vide prescription No. 49.
Dose—10 to 30 grains thrice a day.
Ther. use—Said to be useful as an appetizer and in flatulence.

This compound powder was found useful in flatulence and intestinal colic, also in bronchial and nasal catarrh.

50. *Vaishavanar churnam* (compound powder of Saindhava salt No. 2)—
Composition—vide prescription No. 50.
Dose—20 to 60 grains to be taken three times a day.
Ther. use—Gastric stimulant and carminative.

This compound powder has the same composition as the one below (51) and also possesses similar properties. It was used as a carminative in cases of indigestion, loss of appetite and flatulent dyspepsia with eructuation and found to do good to such disorders.

51. *Vadavanal churnam* (compound powder of Saindhava salt No. 1)—
Composition—vide prescription No. 51.
Dose—10 to 40 grains to be taken thrice a day.
Ther. use—Aperient, alterative and expectorant, useful in gastritis, loss of appetite and chest affections with cough.

This was given to patients with chronic gastritis and was found to alleviate their symptoms and to produce a return of appetite.

Decoctions or quaths.

C.D. = Compound decoctions.

52. *Bharangyadhi kashayam*—
Composition—vide prescription No. 52.
Dose—1 to 2 ounces three times a day.
Ther. use—Said to be useful in asthma and bronchitis.

In Hindu medicine this decoction whose principal ingredients are clerodendron serrata, justicia adhatoda, tinospora cordifolia is extolled as a remedy in attacks of severe asthma. It has to be administered with powdered pepper. On trial, it was found to give relief to asthma cases after its continued administration for 2 or 3 days.

53. *Calatropis gigantea (C.D)*—
Composition—vide prescription No. 53.
Dose—½ to 1 ounce twice a day.
Ther. use—It is considered to be an alterative and expectorant; said to be useful in acute inflammation of the respiratory tract.

It was found to be efficacious in mild cases of bronchitis and influenza.

54. *Kalingakudi (C.D)*—
Composition—vide prescription No. 54.
Dose—½ to 1 ounce twice or thrice a day.
Ther. use—Bitter tonic, anti-periodic; said to be useful in fevers especially so in malarial fevers.

This compound decoction was given in ounce doses to cases of malarial fevers but the action was very mild and not satisfactory.

55. *Terminalia arjuna* (C.D.)—
Composition—vide prescription No. 55.
Dose—½ to 1 ounce twice a day.
Ther. use—It is considered to be an astringent and tonic.

This decoction prepared from the bark of Terminalia Arjuna was tried in half a dozen cases of valvular diseases of the heart but it did not appear to possess the properties attributed to it (vide notes under extract terminalia arjuna liquid).

56. *Dasamoola Panchakoladhi kashayam*—
Composition—vide prescription No. 56.
Dose—1 to 2 ounces three times a day.
Ther. use—Said to be useful in ascites.

No benefit was derived in ascites.

57. *Pathyadhi quath* (compound decoction of Chebulic Myrabolans).
Composition—vide prescription No. 57.
Dose—½ to 1 ounce three times a day.
Ther. use—Bitter tonic and antiperiodic, useful in dyspepsia febrile conditions and in hemicrania.

This decoction was given to patients during convalescence after fevers and was found to act as a bitter tonic in such cases. In three cases of hemicrania in which it was tried, the patients did not derive any benefit.

58. *Sahacharadhi kashayam* (decoction of Justicia Ecbolium).
Composition—vide prescription No. 58.
Dose—½ to 1 ounce three times a day.
Ther. use—In rheumatism and paralysis affecting the lower extremities.

This was given to two cases of chronic rheumatism of the knee joints but the result was unsatisfactory.

59. *Shadanga panya* (compound decoction of six drugs)—
Composition—vide prescription No. 59.
Dose—Ad libitum.
Ther. use—Said to be a useful drink for appeasing thirst and relieving heat of the body in fever.

This cooling decoction is a famous and well known remedy in Malabar which almost every mother knows to administer to her little ones seized with fever. It is generally administered to adults as a diaphoretic and for quenching thirst in fevers. It is also used in subduing vomiting accompanying fevers. This decoction was used as a diaphoretic and for quenching thirst in all sorts of fevers and found to serve those purposes well.

60. *Vidarigandhadigana quath* (Compound decoction of Ipoemæa digitata)—
Composition—vide prescription No. 60.
Dose—½ to 1 ounce three times a day.
Ther. use—Bitter, expectorant, alterative and diuretic; reduces temperature and cures cough.

This compound decoction was administered to several cases of bronchitis, the result of influenza and was found to be generally beneficial in effecting a cure.

Ointments, Liniments and Lepas.

61. *Avalgujadhi lepa*—
Composition—vide prescription No. 61.
Ther. use—Said to be useful in ringworm and eczema, psoriasis and other skin diseases.

This was found to be generally beneficial in curing even fairly long standing cases of ringworm.

62. *Kushtadi Lepa*—
Composition—vide prescription No. 62.
Ther. use—Specially useful in ringworm.

This was found to be generally beneficial in curing even long standing cases of ringworm.

63. *Kurshai Kuba*—
Composition—vide prescription No. 63.
Ther. use—Said to be useful in ringworm.

This compound preparation was found to be useful as an external application in recent cases of different varieties of tænia but in chronic cases it only gave temporary relief.

64. *Dhanwantari thailam.*—21 and 101 times boiled.

Composition—*vide prescription* No. 64.

Dose—4 annas weight to be taken in cumin seed decoction.

Ther. use—For all disorders produced by the derangement of the wind humour emaciation, weakness; useful in the diseases of generative organs, paralysis and rheumatism.

This was found to be useful in neuralgias but not in rheumatism.

65. *Paradadi ointment*—

Composition—vide prescription No. 65.

Ther. use—Said to be useful in parasitic skin diseases such as ringworm of the scalp, scabies, etc.

This was used as an external application in ringworm of the scalp and found to be beneficial in such cases.

66. *Prabhanjana Vimardhana*—

Composition—vide prescription No. 66.

Ther use—Used externally in rheumatism, paralysis and other nervous diseases.

This compound liniment was given as an external application to a case of sciatica and a case of neuritis of legs attended with pain. It was found to be efficacious in alleviating the pain temporarily in both those cases.

67. *Khursai-aksir-ai-Pachis*—

Composition—vide prescription No. 67.

Dose—One tablet twice a day.

Ther. use—Said to be useful in dysentery.

A few patients suffering from acute dysentery and mucous enteritis were treated with these tablets and the result was satisfactory.

68. *Dashanga Guggulu.*—Compound pill of bdollium, plumbago zeylanicum, etc.

Composition—vide prescription No. 68.

Dose—1 to 4 pills three times a day.

Ther. use—Alterative and tonic, useful in nervous and rheumatic affections and also in reducing obesity. Rheumatic patients did not derive any benefit from it.

69. *Hubbai-jee-khun-nafas No.* 1 (*Asthma pills*)—

Composition—vide prescription No. 69.

Dose—One pill thrice a day.

Ther. use—Relieves the spasm, good expectorant and also relieves constipation.

The chief ingredients of these pills are opium, myrrh, hyoscyamus and benzoin. They are said to possess antispasmodic and expectorant properties. Patients with asthma who were put on these pills were relieved by their use; there was free expectoration in cases of bronchitis.

70. *Hubbai Zeekhun-nafas No.* 2 (*Asthma pills*)—

Composition—vide prescription No. 70.

Dose—One pill thrice a day.

Ther. use—Relieves the spasm of asthma

These pills were tried in cases of asthma and the result was disappointing.

71. *Hubbai-Sahfa*—

Composition—vide prescription No. 71.

Dose—1 to 3 pills once a day.

Ther. use—Checks the periodical fever and troubles of elephantiasis and relieves constipation.

These pills were given to patients, who were troubled with constant attacks of filarial fever, with elephantioid swelling. After taking the pills for about three weeks, the patients were relieved of fever and have been free from it up to the date of writing this report.

72. *Hubbai-Javahir*—

Composition—vide prescription No. 72.

Dose—One pill for infants and children and two pills for adults thrice a day.

Ther. use—Said to be useful in all the fevers, accompanied by cold, running in the nose, and headache

These pills whose chief ingredients are aconite, cinnabar, amber, pearls, pellitory, silver leaves, etc., are said to be very useful in catarrh and inflammation of the mucous membrane of air passages attended with fever. These pills were administered to children and adults for nasal and bronchial catarrh and in acute bronchitis and were found to act very efficiently in those diseases.

73. *Khursai-Mulian*—

Composition—vide prescription No. 73.

Dose—One tablet

Ther. use—Said to be useful in constipation.

These purgative tablets were found useful as mild aperient.

74. *Khursai Gul*—
Composition—vide prescription No. 74.
Dose—One tablet twice a day.
Ther. use—Said to be very useful in tertian ague and other intermittent fevers.

These tablets were administered to patients suffering from intermittent fever (malarial); they did not do any good to the patients who had to be subsequently treated with quinine.

75. *Kasis Tablets*—
Composition (vide prescription No. 75).
Dose—1 to 5 tablets twice a day after meal.

These tablets were found useful in relieving the pain and increasing the discharge in amenorrhœa.

76. *Pakshavadha Gugulu.*—Compound pill of bdellium, three myrabolans, etc.
Composition—vide prescription No. 76.
Dose—1 to 4 pills of 6 grains each three times a day with Rasna Quath.
Ther. use—Alterative and tonic, useful in paraplegia and hemiplegia.

Three hemiplegic patients were treated with these pills for sufficiently long time but no improvement was noticed.

77. *Sanjivini pills.*—Compound pill of aconitum ferox and semicarpus anacardium, etc.
Composition—vide prescription No. 77.
Dose—1 to 4 pills of 1 grain each.
Ther. use—Sedative to the stomach and intestines; useful in indigestion and chronic diarrhœa.

These pills were found to possess the properties attributed to them.

78. *Trikatukadhi Gutika.*—Compound pills of the three acrids.
Composition—vide prescription No. 78.
Dose—1 to 4 pills of 2 grains each after meals with milk.
Ther. use—Tonic, alterative; useful in anæmia, dropsy, diabetes, constipation and spermatorrhœa.

These pills were administered to cases of tubercular phthisis, and no improvement except a slight alleviation of the cough was noticed.

Rasas.

79. *Arshakutara Rasa*—
Composition—vide prescription No. 79.
Dose—1 to 4 pills of 2 grains each three times a day with buttermilk.
Ther. use—Tonic and laxative; especially prescribed in piles.

These pills when given in cases of bleeding piles act as a gentle laxative and had no effect on the bleeding.

80. *Gandumalkandan Rasa*—
Composition—vide prescription No. 80.
Dose—3 to 12 pills of one grain each twice a day.
Ther. use—Alterative, and hæmatinic; said to be specially efficacious in tubercular glands by improving general health.

These pills were given to cases of tubercular glands but had not the slightest effect on the glands or the accompanying hectic fever.

81. *Grahani Vajra Kapat Rasa*—
Composition—vide prescription No. 81.
Dose—1 to 4 pills of one grain each to be taken three times a day.
Ther. use—Antacid, relieves pain and distension of the bowels in chronic diarrhœa.

These pills were found to be useful in relieving the indigestion, flatulence and discomfort accompanying chronic enteritis.

82. *Kalkoota Rasa*—
Composition—vide prescription No. 82.
Dose—1 to 3 pills three times a day.
Ther. use—Useful in cases of fever with delirium and also antipyretic and antiperiodic. It was found to be beneficial in a case of typhoid fever.

83. *Lakshminarayana Rasa*—
Composition—vide prescription No. 83.
Dose—1 to 3 pills every three hours.
Ther. use—Anodyne, antipyretic, diaphoretic.

In hemicrania and other forms of neuralgia, these pills were found to be useful. The pills also reduced the temperature and caused diaphoresis in remittent and intermittent fevers.

84. *Lokanatha Rasa*—

Composition—vide prescription No. 84.

Dose—1 to 4 pills of one grain each three times a day.

Ther. use—Useful in hepatitis, jaundice and dropsy.

These pills were administered to a patient with dropsy as a result of dilatation of the heart. The patient's condition was relieved by its use.

85. *Mehamudgara Rasa*—

Composition—vide prescription No. 85.

Dose—1 to 4 pills to be taken twice a day after meals.

Ther. use—Tonic and antiperiodic. A few cases of mild malarial fever were put on these pills and cured by their use.

86. *Maha Mriganka Rasa*—

Composition—vide prescription No. 86.

Dose—2 grains.

Ther. use—Said to be useful in consumption, hoarseness of voice, hectic fever, etc.

This compound preparation was administered to a few cases of tubercular phthisis and the result was disappointing.

87. *Maha Vatha Vidhwamsi Rasa*—

Composition—vide prescription No. 87.

Dose—2 grains to be mixed with honey and given twice a day.

Ther. use—Useful in all rheumatic pains, abdominal dropsy, anorexia and asthma.

88. *Panchamrita Parpati*—

Composition—vide prescription No. 88.

Dose—2 to 8 grains twice a day with powdered long pepper.

Ther. use—Said to be very useful in chronic diarrhœa and sprue.

This compound pill was given to cases of chronic enteritis and diarrhœa and found to be generally useful.

89. *Pradararipoo Rasa*—

Composition—vide prescription No. 89.

Dose—1 to 4 pills of 2 grains each three times a day with boiled starch water.

Ther. use—This rasa is a tonic and astringent and is said to be useful in leucorrhœa and chronic diarrhœa.

It proved to be efficacious in both the diseases.

90. *Panchabana Rasa*—

Composition—vide prescription No. 90.

Dose—2 grains.

Ther. use—Said to be useful in general debility and diseases of the head.

Under its use, the patients gained strength and vigour and the drug no doubt acted as a general tonic.

91. *Ratnagiri Rasa*—

Composition—vide prescription No. 91.

Dose—2 to 6 grains every 3 hours with decoction of coriander.

Ther. use—Said to be very valuable in fevers.

This was given to cases of malarial fevers. Ordinary malarial fever was easily cured by it after a few days' administration.

92. *Rasa Raja Rasam*—

Composition—vide prescription No. 92.

Dose—2 grains.

Ther. use—Said to be useful in all fevers.

This drug was administered to a bad case of typhoid fever with delirium and persistent high temperature. After a few days' use all the typhoid symptoms abated; thereafter, the patient had an uninterrupted recovery.

93. *Shwasa Chinthamani Rasa*—

Composition—vide prescription No. 93.

Dose—1 to 4 pills three times a day.

Ther. use—Said to be useful in asthma, phthisis, anæmia and general debility.

These pills were administered to several cases of asthma and were found to relieve the spasms and alleviate the symptoms.

94. *Vishava Tap Harana Rasa*—

Composition—vide prescription No. 94.

Dose—1 to 4 pills of 1 grain each.

Ther. use—Purgative and diaphoretic. Two pills were found sufficient to produce 3 or 4 watery evacuations.

95. *Vatha Rakshasam*—

Composition—vide prescription No. 95.

Dose—2 grains to be mixed with honey and given twice a day.

Ther. use—Paralysis, rheumatism, and malarial fever.

This was given to cases of malarial fever. In bad cases, it had to be administered from 7 to 10 days before the patients recovered.

96. *Vatha Vidhwamsi Rasa*—

Composition—vide prescription No. 96.

Dose—2 grains to be rubbed in honey and given twice a day.

Ther. use—Useful in all rheumatic pains, abdominal dropsy, anorexia and asthma.

This compound was given to several cases of chronic rheumatism. A few of the patients obtained relief from protracted use of the drug; but in others it did not do good.

APPENDIX III.

Formulæ of compound preparations.

ARISHTAS.

1. *Abhaya-Arishtam*—

Chief ingredients are—

Chebulic myrabolans (without seeds) (8 palams.)
Gooseberries (seedless) (6 palams.)
Root of citrullus colocynthis (5 palams.)
Bark of symplocos recemosa.
Pepper, Long pepper (each one palam.)
Convolvulus paniculatus.
Elavalukam and Feronia Elephantum (fruits of) 10.

All these to be boiled in 64 measures of water; concentrate to 16 measures, strain, add 60 lbs. of sugar, 16 palams of flowers of woodfordia floribunda, put in an old pot used for preserving oil and allow to ferment for 18 days.

Dose—½ to 1 ounce three times a day.

Ther. use—Increases appetite, helps digestion of food, cures piles, anæmia, skin diseases, ascites, enlarged spleen, fevers, dropsy, heart diseases, consumption, vomiting, etc.

2. *Pippali Arishta*—

Chief ingredients are—

Pippali	Piper longum.
Lodhra	Symplocos racemosa.
Maricha	Piper nigrum.
Patha	Cissampelos pareira.
Draksha	Vitis vinifera.

Dose—½ to 2 tolas, as directed.

Ther. use—Stimulant, useful in cough, anorexia and asthma.

ASAVAS.

3. *Kanaka Asava*—

Chief ingredients are—

Kanaka	Datura Stramonium.
Vasa	Adhatoda vasica.
Yastimadhu	Glycyrrhiza Glabra.
Pippali	Piper Longum.
Dhatakipushpa	Woodfordia floribunda.
Draksha	Vitis Vinifera.

Dose—½ to 2 tolas twice after meals.

Ther. use—Demulcent, expectorant, antispasmodic and anodyne; useful in cough, asthma, phthisis.

4. *Kumari Asava*—

Chief ingredients are—

Kumari	Aloe officinalis.
Dashmoola	The ten roots.
Pushkarmoola	Costus speciosa.
Dhanvayasa	Fagonia Arabica.
Chitraka	Plumbago Zeylanica.
Draksha	Vitis Vinifera.
Dhataki puspha	Woodfordia floribunda.

Dose—½ to 2 tolas twice after meals.

Ther. use—Stimulant, laxative and alterative; useful in cough, asthma, colic, chronic constipation.

5. *Asoka Ghritham*—

Dose—¼ to 1 tola, to be taken twice a day.

Ther. use—Alterative ; useful in leucorrhœa, menorrhagia and other female complaints.

6. *Annoh-Daroo*—

Gulai-surach	Red rose petals	6	drams.
Sad-i-koffi	Cyperus rotundus	5	,,
Loung	Eugenia Caryophyllata	3	,,
Mastagi	Pistacia terebinthus.	3	,,
Asaroon	Valeraina Hardwickii	3	,,
Sumbullateeb	Valerian Rhizome	3	,,
Khakila-i-sigar	Lesser cardamoms	2	,,
,, Kubar	Greater cardamoms	2	,,
Zarnab	Cinnamomum Tamala	2	,,
Jouzboa	Nut of nutmeg (Myristica officinalis)	2	,,
Bisbasa	Arilus of nut mace (myristica officinalis)	2	,,
Darchiney	Cinnamomum Zeylanicum (bark)	2	,,
Khirfa	,, Cortex	2	,,
Zafran	Sasaferas Indica	2	,,
Amela Munakka	Fruits of emblic myrabolans	1	lb.
Sugar	Saccharam alba	90	mashas.
Honey	Mel	90	,,

First boil amela (fruits of Emblic myrabolans) with some water, remove the seeds and grind well. Powder all the other ingredients, make confection of honey, sugar, and amela by boiling and then when it is cool mix the powder with it,

Dose—½ to ¾ tola, two or three times a day.

Ther. use—Removes the foul smell from the mouth. Improves digestion and is useful in heart disease.

7. *Agasthya Rasayanam*—

The ten roots.
Root of cleome viscosa.
Root of clitorea ternatea.
Curcuma longa.
Root of sida cordifolia.
Scindapsus officinale.
Achyranthes aspera.
Piper longum.
Root of chavica roxburghi.
Root of plumbago zeylanica.
Root of clerodendron serrata.
Root of costus speciousus.
Wheat (64 palams.)

} Each two palams.

All these to be boiled in 20 measures of water and, when well boiled, strain the decoction, add 100 chebulic myrabolans, 30 lb. of sugar, ¼ measure ghee, ¼ measure gingelly oil and ¾ measure of powdered long pepper. Boil and concentrate to the consistence of a confection. When cold, add ¼ measure honey.

Dose—Daily two myrabolans thus prepared.

Ther. use—Removes freckles, grey hair, gives tone, colour and longevity to the body, cures all kinds of cough, consumption, asthma, hiccough, poisonous fevers, piles, flatulence, anorexia and nasal catarrh. This confection is said to have been first prepared by saint Agasthya.

8. *Confection Dhaiphal*—

Dadhaki.	Woodfordia Floribunda.
Bala	Aegle marmelos.
Lodhra	Symplocos Racemosa.
Valo	Andropogon muricatus.
Gaja-pippali	Scindapsus officinalis.
Honey	Mel.

Powder and mix and turn into a confection.

Dose—1 to 2 drs.

Ther. use—Stimulant and astringent; given in dysentery also in checking hæmorrhages and chronic discharges, such as menorrhagia and leucorrhœa.

9. *Dhatrayavaleha*—

Chief ingredients are—

Amalaka	Phyllanthus Emblica.
Yastimadhu	Glycyrrhiza Glabra.
Vanshlochan	Bamboo Manna.
Pippali	Piper longum.

Dose—$\frac{1}{4}$ to 1 tola, to be taken with milk twice or thrice a day.

Ther. use—Alterative, stimulant, demulcent. Useful in cough, bronchitis and other chest affections.

10. *Davaul musk*—

Chief ingredients are—

1.	Murvareed	Pearls (ground)	2 drams.
2.	Kharuba	Amber „	2 „
3.	Gulai Surakh	Red rose petals (dry)	2 „
4.	Abrasham	Silk cocoon (cleaned)	2 „
5.	Darcheni	Cinnamomum Zeylanicum	2 „
6.	Bahamana-i-surakh	Salvia Hæmatoda	2 „
7.	„ sufeed	Centaurea Behen	2 „
8.	Daroonaj	Doronicum Pardalianches	2 „
9.	Zafran	Sassaferas Indica	2 „
10.	Mastagi	Pistacia Terbinthus	1 „
11.	Ushna	Permelia kamts chadalis	1 „
12.	Hulbova	Elettaria Cardamomum	1 „
13.	Sandalai sufeed	Santalinus alba	3 „
14.	Tabashir	Bambusa Arundinacea (siliceous concretions)	3 „
15	Sandalai surakh	Santalinus Rubra	3 „
16.	Kushnuz	Coriander fructus	3 „
17.	Gulai Gauzaban	Coccinia glance	3 „
18.	Amelai munaki	Grapes (sour variety)	3 „
19.	Busad	Ochre	3 „
20.	Thukmai khurfa	Cinnamomum Cassia	3 „
21.	Silver leaves		3 „
22.	Zerishk	Berberis asiatica	$1\frac{1}{2}$ „
23.	Agur	Aquilaria Agallocha	$1\frac{1}{2}$ „
24.	Badranjboya	Mellissa officinalis	$1\frac{1}{2}$ „
25.	Umber		3 mushas.
26.	Musk		3 „
27.	Apple juice		17 palams.
28.	Sugar		17 „
29.	Honey		17 „

Powder all the ingredients with the exception of items 1, 2, 14, 19, 21, 22, 25, and 26.

Numbers 1, 2 and 14 should be well ground on a separate stone, adding rosewater for a period of two days. Then boil well items 27, 28 and 29; after thorough boiling, add the above powder to it.

Powder Nos. 19, 22, 25 and 26 and add to the mixture; items 1, 2, and 14 to be mixed later and at the end item 21 to be mixed with the whole preparation.

Dose—$\frac{1}{8}$ to $\frac{1}{4}$ tola.

Ther. use—Gives strength to the cardiac muscles and is useful in functions of the heart. Also strengthens the central nervous system.

11. *Gulgul Thikthakam*—

Bark of neem.
Tinospora cordifolia.
Root of justicia adhathoda.
Trichosanthes dioica.
Root of solanum jacquini.

Take 10 palams of each of these and 16 measures of water and concentrate to two measures by boiling. Add one measure of ghee after straining the decoction.

The kalkam medicines are—

Stephania Hernandifolia.
Convolvulus Paniculatus.
Cedrus deodara.
Scindapsus officinalis.
Carbonate of potassium.
,, sodium.
Zingiber officinalis.
Curcuma longa.
Anethum sowa.
Root of chavica rox-burghi.
Calophyllum Tomentosum.
Piper nigrum.
Ptychotis ajowan.
Seeds of Holarrhena antidysenterica.
Root of plumbago zeylanicum.
Picrorrhiza kurroa.
Acorus calamus.
Root of piper longum.
Rubia cordifolia.
Aconitum heterophyllum.
Cuminum cyminum.

Take each of the above 3 kalanghis.

Purified bdellium (5 palams).

Add all these as kalkam to the prepared ghee.

Dose—½ to 1 ounce three times a day.

Ther. use—For all kinds of wind disorders, skin diseases, ulcers, syphilis, internal piles, scrofula, dysentery, diabetes, consumption, anorexia, ozoena, asthma, emaciation, heart diseases, anaemia.

12. *Jawarisha-i-amela*—

Tabashir	Bambusa Arundinacae	} 1 tola.
Sandal-ai-sufeed	Santalinus alba	
Garda Samagh	Rhus coriaria (Husk from the dry seeds of samach).	
Zarishk	Berberis asiatica	} 1 tola.
Gulaisurkh	Red rose petals	
Badranjaboya	Mellisa officinalis	
Postai-Banroona pista		
Kashnez	Coriandrum sativum	} 2 tolas.
Tukhma-i-khurfa	Carum roxburghianum	
Amela (Saturated with milk) fruits of emblic myrobolans.		12 tolas.
Sugar candy		60 tolas.
Umber		1 dram
Agar	A quilaira Agallocha	1 tola.
Saffron	Crocus sativus	2 drams.
Rose water		12 tolas.
Murabbai-behee		15 tolas.

Make a confection of rose water, amela, and sugar candy and add to it when cold the other ingredients (powdered).

Dose—½ to ¾ tola twice or thrice a day.

Ther. use—Improves digestion; useful in stomatitis, removes the excess of heat from the body.

13. *Jawarishai-Suliamani*—

Zerra	Cuminum Cyminum	5 palams.
Podina	Mentha sativus	} 7 drams.
Fil-filai-Siah	Piper nigrum	
Burkasadaf		½ palam.
Darchini	Cinnamomum Zeylanicum	} ⅓ palam.
Bunnaisurkah	Water from cicer arietinum	
Murraba i-adrak	Dry preserved ginger	4 palams.
Murraba-i-Halila	Preserved chebulic myrabolans.	6 palams.
Sugar	Sacharam	} 10 palams.
Honey	Mel	

Turn into a confection.

Dose—½ to ¾ tolas 2 to 3 times a day.

Ther. use—For diarrhoea; dyspepsia; indigestion; heartburn, vomiting of undigested matter.

14. *Jawarisha-i-Thurush*—

Filfila-i-siah	Piper nigrum	} 1 palam.
Zingabeel	Zingiber officinale	
Posta-i-Baibadang	Embelia ribes	
Namaka-i-badboo	Black salt	
Namakai Tam	Sodium chloride	
Namakai-sainda	Rock salt	
Podeena (green)	Mentha sativus	2 palams.
Lime juice		from 10 fruits.

Powder all the ingredients and mix them with lime juice.

Dose—¼ to ½ tola twice a day.

Ther. use—Useful in indigestion and in want of acidity in the stomach.

15. *Kantakari Avaleha*—

Chief ingredients are—

Kantakari.	Solanum zanthocarpum.
Chitraka.	Plumbago zeylanicum.
Shringi.	Rhus succedanea.
Trikatu.	The three acrids.
Rasna.	Vanda Roxburghii.

Dose—½ to 2 tolas, to be taken when necessary, followed by milk.

Ther. use—Expectorant, diuretic and aperient. Useful in cough, bronchitis, asthma and other chest affections, and dropsy.

16. *Khamir-ai-abrasham*—

Abrasham (Clean)	Silk cocoons	42 tolas.
Sandal	Santalinus album	½ tola.
Sumbullateeb	Valerianae radix	5 mashas.
Posta-i-turang	Citron dry	5 mashas.
Mustagi	Pistacia terebinthus	5 mashas.
Lavang	Eugenia caryophyllata	5 mashas.
Danaihed	Elettaria cardomomum	5 mashas.
Sadajae-hindi	Cinnamomum tamala	5 mashas.
Agur	Aquilaira agallocha	4 mashas.

Tie abrasham in a cloth and boil it with 14 tolas of gauzaban water, (coccinia glance) 14 tolas of rose water, 14 tolas of baida mishk water, and 48 palams of distilled water, till the bulk is reduced to about one half, strain and filter; then make a decoction of the filtrate with 14 tolas of behin juice, 14 tolas of sweet pomegranate juice, 14 tolas of apple juice, 6 palams of honey, 9 palams of sugar candy and 9 palams of sugar.

Powder the other ingredients and mix them with confection and add—

Umber		6 mashas.
Gold leaves		½ tola.
Silver leaves		½ tola.
Pearl powdered		1 tola
Yakhoot	Red rubies	9 mashas.
Murjan	Corals	1 masha.
Kharuba	Amber	1 masha.
Eshub	Green hard stone	9 mashas.
Musk		4 mashas.

Dose—¼ to ½ tola.

Ther. use—Said to be useful in all cardiac affections; palpitation is effectively relieved. A good nervine tonic.

17. *Laboobaisagheer*—

Badam.	Amygdalae dulcis.
Akroat.	Juglans.
Bun.	Coffee.
Chalgoza.	A kind of almonds.
Megaza-i-findack.	Kind of almond-like nut.
Hubulkhulkhil.	A kind of pepper.
Khaskhas.	Poppy seeds.
Bahamana-i sufeed.	Centaurea Behen.
Bahamana-i surakh.	Centaurea Red.
Kunjad.	Sesamum Indicum.
Tukhma-Jargeer.	Seeds like aniseed.
Tukhma-Pivaz.	Allium cepa.
Tukhma-Sulgam.	Beet root seeds.
Tukhma-Shabith.	Soyeeh beans.
Zangabeel.	Zingiber officinale.
Darfilfil.	Root of chavica-roxburghii.
Kababa.	Piper cubeba.
Khirfa.	Cinamomum cortex.
Darchiney.	Cinamomum Zeylanicum.
Shakhakhul.	Asparagus ascendens.
Khulinjan.	Alpinia officinarum.
Tukhama-i-Halioon.	Asparagas officinalis.

Take equal parts by weight of each and honey thrice the weight of ingredients.

Powder the ingredients and mix them with honey.

Dose—½ to 1 tola with two or three ounces of milk.

Ther. use—Useful in polyurea due to some kindney affection.

Increases and thickens the semen. Builds up the nervous tissue and also the kidney tissue.

18. *Mamsa Sarpishi*—

Mutton	100 palams.
Water	32 measures.

Boil down to 4 measures, strain, then add 1 palam of each of the drugs, included in jeevaniya ghanam. After grinding, add to this one measure of ghee, boil and strain.

Dose—½ to 1 ounce three times a day.

Ther. use—Useful in insanity, epilepsy and paralytic disorders.

19. *Majoonai Mussifi*—

Badian	.. ..	Pimpinella anisum	14 mashas.
Sandal	.. ..	Santalinus alba	14 „
Bisfaij	.. ..	Polypodium Vulgare	7 tolas.
Sana	.. ..	Senna indica	7 „
Ushba	.. ..	Sarsæ radix	7 „
Honey	.. ..	Mel	28 „
Sugar	.. ..	Saccharam	24 palams.

Powder and mix all the ingredients with honey and sugar. Turn into confection.

Dose—¼ to ¾ tola twice a day.

Ther. use—Relieves constipation, removes chronic ulcers and other skin affections.

20. *Majoonai sual*—

Munnaka	..	Preserved grapes	48 tolas.
Aslaisus	..	Glycyrrhiza radix	8 „
White sugar ..	..	Saccharam alba	32 „
Postai-halelai Kabli	..	Chebulic myrabolans	2 „
Do. Balila	..	Beloric myrabolans	2 „
Darcheny	..	Cinnamomum Zeylanicum	2 „
Kharanfil	..	Eugenia caryophyllata	2 „
Jouzbuva	..	Myristica officinalis	2 „
Zaranbad	..	Curcuma Zedoaria	2 „
Badian	..	Pimpinella anisum	½ „
Amela	..	Emblic myrabolans	½ „
Anisoon	..	Anothum sowa	½ dram.

Make decoction of aslaisus (glycyrrhiza radix) powder all the other ingredients and make confection with sugar and grapes preserved.

Dose—½ to 1 tola twice a day.

Ther. use—Expectorant and very useful in bronchitis.

21. *Majoonai Malarial fever*—

Juntiana	..	Gentiana radix	1 dram.
Filfil	..	Piper nigrum	1 „
Khust	..	Aplotaxis auriculata	7 mishal.
Sadaja-i-hindi ..	..	Cinnamomum Tamala	7 „
Sumbul lateeb ..	..	Valerianæ radix	7 „
Ræwad cheny ..	..	Rhei radix	7 „
Honey	..	Mel	11 palams.

Powder all the ingredients and mix them with honey which is previously boiled and cooled.

Dose—¼ to ½ tola thrice a day.

Ther. use—Useful in malaria; long continued use brings on reduction in the enlargement of spleen and liver.

22. *Mahatikta Ghrit*—

Chief ingredients are—

Saptaparna	Alstonia scholaris.
Katuki	Picrorrhiza kurroa.
Patha	Cissampelos Pareira.
Parpat	Oldenlandia Herbaceæ.
Moorva	Clematis Triloba.
Vasa	Justicia Adhathoda.
Sariva	Hemidesmus indicus.

and other bitter tonics.

Dose—½ to 2 tolas, to be taken twice a day.

Ther. use—Bitter tonic and alterative; useful in chronic skin diseases and in leprosy.

23. *Mahajam-e-til*—

Padma kashta	..	.. Prunus pudum	4 drs.
Lavang	.. ..	.. Eugenia caryophyllata	4 „
Darunaj-e-akrabi	..	.. Doronicum pardalianches	4 „
Behaman-e-saphed		.. Centaurea behen	3 „
Behaman-e-surkha		.. Salvia Hæmatodes	2 „
Tuja	.. ..	.. Flacourtia cata phracta	2 „
Jæphal	.. ..	.. Myristica fragrans	2 „
Javantri	.. ..	.. Flowers of do.	2 „
Jatamasi	.. ..	.. Valeriana Jatamansi	2 „
Zera-kachura	..	.. Curcuma zeodoaria	2 „
Jaranbad	.. ..	.. Do. another variety	2 „
Pippali	.. ..	.. Piper longum	..
Pippali mula	..	.. Root of chavica roxburghii	2 drs.
Kesara	.. ..	.. Crocus sativus	1½ „
Ispanda	.. ..	.. Peganum Harmala	3 „
Kubab chini	..	.. Cubeba officinalis	3 „
Elachi	.. ..	.. Elettaria cardomomum..	1 „
Kulpha	.. ..	.. Portulaca oleracea	3 „
Sugar	.. ..	.. Saccharam	2 „

Mix and make confection.

Ther. use—Said to be useful in dyspepsia, congested liver, anorexia, etc.

24. *Madhusnuhi Rasayanam*—

Tinospora cordifolia.
Bœrhavia diffusa.
The three myrabolans.
The three acrids.
Cardamomum.
Cinnamom leaves.
Cuminum cyminum.
Saindhava salt.
Evolvulus paniculatus.
Alpinia chinensis.
Clerodendron serratta.
Root of piper nigrum.
Do. of Chavica roxburghii.
Coriandrum sativum.
Pimpinella anisum.
Nigella sativa.
Nardostachys jatamansi.
Aplotaxis auriculata.
Root of plumbago zeylanicum.
Hemidesmus indicus.
Curculigo orchioides.
Withania somnifera.

All these 3 kazhanjies each.

Smilax chinensis equal to all the above ingredients; add equal quantities of sugar, ghee, and honey.

Dose—¾ to 1 tola in milk.

Ther. use—Restores loss of appetite and taste; useful in consumption, diabetes, abdominal disorders, skin diseases, nervous debility, etc.

25. *Neelini Ghritham*—

Convolvulus-Argenicus.
The three myrabolans.
Alpinia chinensis.
Sida cordifolia.
Picrorrhiza kurroa.
Convolvulus paniculatus.
Embelia ribes.
Root of solanum jacquini.

Take one palam of each. Make a decoction in 4 measures of water, concentrate it to ½ measure. Strain and add to the clear decoction one measure of ghee and one measure of curd, also one palam of kallipal, (Milky juice of Euphorbia Tirucalli). Boil till all the watery portion is evaporated and turn into ghritham.

Dose—½ to 1 tola in starch water twice a day.

Ther. use—Skin diseases, ascites, dropsy, anæmia, enlarged spleen, insanity and dysmenorrhœa

26. *Panchagaviya Ghritham*—

Root of cyperus rotundus.
Cardomoms.
Root of plumbago zeylanicum.
Root of evolvulus paniculatus.
Glycyrrhiza glabra.
Curcuma longa.
Root of rubia cordifolia.
Root of stephania hernandifolia.
Acorus calamus.
Piper longum.
Picrorrhiza kurroa.
The three myrabolans.
Root of justicia adhatoda.
Vitis vinifera.
Coscinum fenestratum.

The above are the medicines for kalkam and should be boiled in a mixture of the five products of the cow, viz., ghee, milk, curd, urine and the liquid portion of the cow dung.

Dose—½ to 1 oz.

Ther. use—Gives strength, beauty, destroys bile and poisons, cures abdominal swelling, pain in the chest and sterility.

27. *Syrupus Hyssopus officinalis*—

Zupha	Hyssopus officinalis	2 drs.
Tukhmi khitmi	Althæ officinalis	4 „
Khubazi	*Do. another variety*	4 „
Jattimadha	Glycyrrhiza glabra	$1\frac{1}{2}$ „
Anjir	Ficus carica	5
Khaskhas	Poppy seeds	6
Anisum	Pimpinella anisum	6
Gule banafashah	Flowers of viola odorata	3
Raja bansa	.. .. ..	2
Kakadasin	Rhus succedanum	2
Kalo drakh	Grapes	oz. 2
Sapisthan	Cordia myxa	2
Unab	Zizyphus jujuba	40
Boiling water	....	oz. 80

Macerate the whole for 12 hours, then boil down to half the quantity of water and strain. Add 2 lbs. of sugar and prepare syrup.

Dose—$\frac{1}{2}$ to 1 fluid ounce.

Ther. use—Stimulant, carminative, diaphoretic and emmenagogue, said to be useful in dyspepsia, flatulence, asthma, chronic bronchitis, amenorrhœa, rheumatism and influenza.

28. *Syrup Herpestis Monniera (Brahmi)*—

Syrup prepared from the fresh leaves of Herpestis Monniera.

Dose—1 to 2 drachms twice a day after meals.

Ther. use—Useful in hysteria, epilepsy, insanity and mental derangements, also useful in hoarseness and for improving voice.

Bhasmams.

29. *Abrak Bhasmam* (Sahasra Puti) Calcined 1000 times—

Dose—2 to 6 grs. to be taken twice a day with honey.

Ther. use—Useful in phthisis, and debility of old age; gives strength to the body.

30. *Naga Bhasmam*—

Dose—2 to 12 grs. to be taken twice a day with butter or ghee.

Ther. use—Removes urinary disorders and general debility.

31. *Thalaka Bhasmam*—

Dose—$\frac{1}{2}$ to 2 grs. with honey and sugar.

Ther. use—Useful in phlegmatic diseases, cough, fever, etc.

32. *Sringa Bhasmam*—

Dose—6 to 12 grs. with milk, ghee or honey.

Ther. use—Useful in gonorrhœa.

33. *Vanga Bhasmam*—

Dose—2 to 6 grs. to be taken twice a day with honey or butter.

Ther. use—Useful in urinary disorders and general debility.

34. *Yasada Bhasmam*—

Dose—1 to 3 grains with milk, cocoanut water, sugar, or honey.

Ther. use—Useful in dyspepsia, stomach-ache and urinary diseases.

Churnams.

35. *Bhoonimbadhi churnam*—

The chief ingredients are—

Kirata.	Ophelia chiretta.
Katuki.	Picrorrhiza kurroa.
Trikatu.	The three acrids.
Musta.	Cyperus rotundus.
Indrayama.	Holarrhena antidysenterica.
Chitraka.	Plumbago zeylanicum.
Kutajatwak.	Bark of holarrhena antidysenterica.

Dose.—20 to 60 grains to be taken three times a day.

Ther. use—Said to be bitter tonic, intestinal tonic, antiperiodic and gastric stimulant; useful in dyspepsia, chronic diarrhœa, fevers, dysentery and worms.

36. *Chaturushana churnam*—

(The four heating or biting agents).

Pipali.	Piper longum.	All in equal parts.
Miri.	Piper nigrum.	
Suntha.	Zingiber officinalis.	
Pippaili Moola.	Root of chavica roxburghii.	

Dose—10 to 60 grains twice a day.

Ther. use—Said to be useful in colic and flatulence, also for cough and coryza.

37. *Jatiphaladi churnam*—

Vijaya	Canabis sativa.
Jatiphala.	Myristica Fragrans.
Karpura.	Camphor.
Ela.	Elettaria cardamomum.
Lavanga.	Eugenia Caryophyllata.
Chitraka.	Plumbago Zeylanica.
Vanshlochana.	Bamboo manna.

Dose—12 to 24 grains, to be taken with honey twice a day.

Ther. use—Sedative, anodyne, and antispasmodic. Useful in asthma, colic, neuralgia, menorrhagia, dysmenorrhoea, spasmodic cough, etc.

38. *Katphaladi churnam*—

Katphala.	Myrica sapida.	
Mustaka.	Cyperus Rotundus.	
Karkatshringi.	Rhus succedanea.	Equal parts.
Kusta.	Alplotaxis auriculata.	

Dose—Half to one dram given with ginger juice and honey.

Ther. use—Stimulant, diaphoretic, and astringent, useful in diarrhœa, dysentery, fevers asthma and gonorrhœa.

39. *Kapithashtaka churnam*—

Chief ingredients are—

Feronia elephantum.	Aegle marmelos.
Pomegranite.	Woodfordia floribunda.
Tamarind.	Thr three acrids.

Dose—10 to 40 grains, to be taken three times a day with water.

Ther. use—Astringent, stimulant and stomachic

40. *Madanadivamun*—

Chief ingredients are—

Madanaphala.	Randia dumetorum.
Arkamoola.	Calotropis gigantea.
Yasthimadhu.	Glycirrhiza glabra.

Dose—As an expectorant 5 to 15 grains, as an emetic 20 to 60 grs., to be taken with tepid water.

Ther use—Expectorant, demulcent and emetic. Useful as an expectorant in bronchitis and other chest affections; and as an emetic in colic, headache, orchitis, indigestion, etc

41. *Pulvis smilax officinalis Co.* (Anti-rheumatic powder unani)—

		Tolas.
Choab chini	Smilax chinensis	10
Pepper	Piper nigrum	½
Pippalli	Piper longum	½
Siah Musali	Hypoxis orchioides	½
Modi	Root of chavica rox-burghi	½
Dumperashtum	Alpinia chinensis	½
Akkarakhara	Anacyclus pyrethrum	½
Cinnamon	Cinnamomum zeylanica	½
Kababchini	Cubeba officinalis	½

All these must be powdered and mixed.

Dose—Half tola to be taken twice a day in cold water.

Ther. use—Said to be useful in rheumatism and syphilis and is considered a good blood purifier.

42. *Narasimha churnam*—

Chief ingredients are—

Triphala.	The three myrabolans.
Trikatu.	The three acrids.
Tila.	Sesamum Indicum.
Bhallataka.	Semicarpus Anacardium.

Dose—10 to 40 grains, to be taken twice a day with ghee or sugar.

Ther. use—Stimulant, tonic, alterative. Useful in sexual debility, neuralgia and dyspepsia. This is also used in syphilis.

43. *Pushyanuga churnam*—

Chief ingredients are :—

Patha.	Cissampelos Pareira.
Jambuasthi.	Stone of the fruit of eugenia jambolans.
Amrashthi.	Mango stone.
Ashmabeda.	Coleus Aromaticus.
Kutajatwak.	Holarrhena antidysenterica (bark of).
Lodhra.	Symplocos Racemosa.
Bilva peshika.	Aegle marmelos.
Dhatakipushpa.	Woodfordia floribunda (flowers of).

Dose—20 to 60 grains to be taken twice a day with rice water.

Ther. use—Alterative, tonic, astringent, diuretic. Useful in leucorrhœa, menorrhagia and other uterine complaints.

44. *Pancha Kola churnam.* Compound powder of five pungents—

Pipali.	Root of piper longum.
Pipali moola.	Root of chavica roxburghii.
Suntha.	Zingiber officinalis.
Chavika.	Stem of pepper plant.
Chitraka.	Plumbago zeylanicum.

Dose—10 to 30 grains twice a day.

Ther. use—Said to be useful as a good appetizer and is used in dyspepsia, cough, flatulence and enlarged spleen.

45. *Panch-nimb-churnam*—

A compound powder of the five parts of melia azadirachta. These are :—Leaves, bark, root, flowers and fruits. All dried in shade, pounded together and used.

Dose—5 to 20 grains.

Ther. use—The compound powder is tonic, and given in convalescence from fever.

46. *Suffu-fai-siah*—

Kababa.	Cubebs officinalis.
Khas khas.	Poppy seeds.
Postai balila.	Myrabolans (beleric).
Amela.	Fruits of emblic myrabolans.
Zeera safeed.	White caraway fruit.

Take equal quantity of each of the above drugs, roast and powder them finely.

Dose—5 to 10 grains three times a day.

Ther. use—Astringent, said to be useful in dysentery.

47. *Shringyadhi churnam*—

Sole ingredients are ;—

Shringi.	Rhus succedanea.
Pippali.	Piper longum.
Vasha.	Aconitum Heterophyllum.

Dose—1 to 4 grains, to be given three times a day with honey.

Ther. use—Gastric stimulant, astringent, alterative; useful in diarrhœa (infantile) bronchitis, teething, incontinence of urine.

48. *Suranadhi churnam*—

The ingredients are :—

Amorphophallus Campanulatus.	Piper longum.
Plumbago Zeylanicum.	Jaggery.
Zingiber officinale.	

Dose—10 to 30 grains twice a day.

Ther. use—Said to be useful in piles and dysentery.

49.—*Shadushana churnam.* Compound powder of the six acrids—

Pippali	Piper longum.
Pippali moola.	Root of chavica roxburghi.
Suntha.	Zingiber officinale.
Chavika.	Stem of pepper plant.
Chitraka.	Plumbago zeylanicum.
Miri.	Piper Nigrum.

Dose—10 to 30 grains twice or thrice a day.

Ther. use—Said to be useful as an appetizing agent and in flatulence.

50.—*Vaishvanar churnam*—

The chief ingredients are :—

Saindhava,	Common salt.
Ajmoda.	Ptychotis Ajowan.
Yavani.	Carum copticum.
Pippali.	Piper longum.
Shunthi.	Zingiber officinale.
Haritaka.	Terminalia chebula.

Dose—20 to 60 grains twice a day.
Ther. use—Gastric stimulant and carminative.

51. *Vadavanal churnam*—
Chief ingredients are—

Saindhava.	Common salt.
Pippalimoola.	Piper longum (root).
Pippali.	Piper longum.
Chitraka.	Plumbago zeylanica.
Shunti	Zingiber officinale.
Haritaka.	Chebulic myrabolans.

Dose—10 to 40 grains to be taken twice a day with water.
Ther. use—Stimulant, aperient, alterative, expectorant and tonic.

DECOCTIONS OR QUATHS.

52. *Bharangyadhi Kashyam*—

Cheruteku.	Clerodendron serrata.
Thippili.	Piper longum.
Kasahari.	Root of cassia occidentalis.
Haridra.	Bark of coscinum fenestratum.
Vasa.	Root of justicia adhathoda.
Amritham.	Tinospora cordifolia.
Nagaram.	Zingiber officinale.
Dhanya.	Coriandrum sativum.

Prepare the decoction in the usual way.

Dose—1 ounce three times a day.
Ther. use—Said to be useful in relieving the fits of asthma.

53. *Arkadhi*—
Chief ingredients are—

Arka	Calotropis Procera.
Jiraka.	Cuminum Cyminum.
Trikatu.	The three acrids.
Kantakarika.	Solanum Xanthocarpum.
Shringi.	Rhus succedanea.
Kushta.	Saussurea Leppa.

Dose—$\frac{1}{2}$ to 1 ounce to be taken twice a day.
Ther. use—Alterative, stimulant and expectorant. Useful in dengue fever, acute bronchitis, pneumonia and fevers complicated with chest affection.

54. *Kalingakadi Quath*—
Chief ingredients are—

Indrayava.	Holarrhena Antidysenterica.
Patola.	Trichosanthes Dioica.
Katuki.	Picrorrhiza kurroa.

Dose—$\frac{1}{2}$ to 1 ounce to be taken twice a day.
Ther. use—Bitter tonic, anti-periodic. Useful in fevers specially in fevers with liver derangement.

55. *Terminalia Arjuna*—
Chief ingredient is—

Arjuna.	Terminalia Arjuna.

Dose—1 to 2 ounces twice a day.
Ther. use—Said to be useful in heart-diseases.

56. *Dasamoola Panchakoladhi Kashayam*—

Dasamoola.	The ten roots.
Panchkolam.	The five pungents.
Thippili.	Piper longum.
Ginger.	Zingiber officinale.
Chavica.	Stem of the pepper plant.
Pippali moola.	Root of chavica roxburghii.
Chitraka.	Root of plumbago zeylanicum.
Triphala.	The three myrabolans.
Dhanti.	Baliospermum montanum.
Thrivrith.	Ipoemea Turpethum.

Prepare the decoction in the usual way.
Dose—1 ounce three times a day.
Ther. use—This is very much resorted to for the relief of ascites.

57. *Patyadi Quath*—

Chief ingredients are

Triphala.	The three myrabolans.
Kirata	Swertia Chirata.
Gudoochi.	Tinospora cordifolia.

Dose—1 to 2 ounces to be taken twice a day.

Ther. use—Alterative, bitter tonic and antiperiodic. Said to be useful in dyspepsia and feverishness; and hemicrania.

58. *Sahacharadhi Kashayam*—

Karingurinjee.	Ecbolium linneanum.
Devadaram.	Cedrus deodara.
Chukku.	Zingiber officinalis.

Prepare decoction in the usual way.

Dose—1 ounce three times a day.

Ther. use—For all rheumatic and paralytic complaints.

It is said that if this decoction is administered along with castor-oil, rheumatic and paralytic patients who are bed ridden, will regain the power of moving about.

59. *Shadanga Paniyam*—

The tubers of cyperus rotundus.	
Red sandalwood.	
Root of andropogon Muricatus (Usira).	Each one drachm.
Oldenlandia Herbacea (Parpata).	
Pavonia odorata (Baala).	
Dry ginger.	
Water.	Two seers.
Boil down to one seer.	

Ther. use—This decoction is given as a drink for quenching thirst and relieving heat of the body in fevers.

60. *Vidarigandhadigana Quath*—

Chief ingredients are—

Shaliparni.	Desmodium Gangeticum.
Vidari.	Ipomœa Digitata.
Gokshuraka.	Tribulus Terrestris.
Shatavari.	Asparagus racemosus.
Sariva.	Hemidesmus Indicus.
Punarnava.	Boerhavia diffusa
Brihati.	Solanum Indicum.

Dose—1 to 2 ounces to be taken twice a day.

Ther. use—Bitter tonic, nutritive, expectorant, alterative and diuretic. Said to be useful in fevers and bronchitis.

Ointments, Liniments and Lepas.

61. *Avalgujadi Lepa*—

Chief ingredients are—

Bawuchi seeds.	Psoralia corylifolia.
Chakramarda seeds.	Cassia Tora.

Directions for use—Paste of the powder with lemon juice should be applied on the part affected.

Ther. use—Useful in ringworm and eczema; psoriasis and other skin diseases.

62. *Kushthadi Lepa*—

Chief ingredients are—

Kushta.	Saussurea Lappa.
Vidanga.	Embelia Ribes.
Chakramarda.	Cassia Tora.

Ther. use—The paste of this powder with lemon juice should be applied on the affected part. Useful in ringworm.

63. *Kursh-ai-kuba*—

Sulphur.	
Black zeera.	Nigella sativa.
Mercury.	
Bavancha.	Psoralia corylifolia
Gile-armani.	Bolus armenia rubra.

Take all in equal parts, powder them well and grind in ginger juice, make into tablets

Ther. use—Said to be useful as an external application in ringworm.

64. *Dhanwantri Thailam*—

Bala.	Sida Cordifolia.
Milk.	
Wheat.	Triticum Vulgare.
Kolam.	
Kulastham (old horse gram).	
Dasamoola.	The ten roots.
Medha.	Physalis flexuosa (withania somnifera).
Maha medha.	Ichnocarpus frutescens or Hemidesmus Indicus.
Daroo.	A tree like oak.
Devadarum.	Cedrus deodara.
Manjista.	Rubia Cordifolia.
Kakoli.	Berries of luvunga scandens.
Ksheera kakoli.	Do. variety.
Chandanam.	Santalinus album.
Nunnari.	Hemidesmus indicus.
Koshtam.	Aplotaxis auriculata.
Thagaram	Taberna montana.
Jeevaka.	Tinospora cordifolia.
Yedavakam.	Carpropogea pruriens.
Saindhavam.	Saindhava salt.
Uluva.	*Trigonella foenum-graecum.*
Kanmatham.	Rock exudate.
Vacha.	Acorus calamus.
Agaru.	Aquilaria agallocha.
Punnarnava.	Boehaavia diffusa.
Aswaghandha.	Withania somnifera.
Sathavari.	Asparagus racemosus.
Ksheera suklam.	
Yashthimadu.	Glycyrrhiza glabra.
Triphala.	The three myrabolans.
Niriasam.	
Sathakuppu.	Anethum sowa.
Ulandu.	Black gram.
Cherupyru.	Green gram.
Katupyru.	Phaseolus Adenanthus.
Yalai arisi.	Eugenia cardomomum.
Ecananga tholi.	Bark of cinnamomum zeylanicum.
Samudrapachi.	*Garcinia xanthochymus.*

The quantity of the decoction of sida cordifolia must be 6 times the quantity of the oil used; so also milk. The decoction of wheat, ten roots, etc., forms one part.

Dose—4 annas weight to be taken in cummin seed decoction.

Ther. use—For all disorders produced by the derangement of the wind humour, emaciation, weakness; useful in the diseases of generative organs, paralysis and rheumatism.

65. *Paradadi Ointment*—

The chief ingredient is—

Parada.	Mercury.

Ther. use—Useful in parasitic skin diseases, such as ringworm of the scalp and scabies.

66. *Prabhanjana Vimardhana*—

Root of sida cordifolia.	Bark of pongamia glabra.
Do. asparagus racemosus.	Root of ricinus communis.
Do. moringa pterygosperma.	Do. ecbolium linneanum.
Do. citrus medica.	Do. withania somnifera.
Do. calotropis gigantea.	*Do. uraria lagopoides.*

The five bigger roots of dasamoola.

Aegle marmelos, colosanthes indica, gmelina arborea, sterospermum suaveolens and premna spinosa.

Make a decoction of these; concentrate to $\frac{1}{4}$ part. Strain the decoction, add gingelly oil, double the quantity of milk and curds, also fermented rice washed water.

For kalkam—add the following:—

Taberna montana.	Plumbago zeylanicum.
Cedrus deodara.	Valeriana jatamansi
Cardomom seeds.	Pinus longifolia.
Ginger	Picrorrhiza kurroa.
Mustard.	Three kalanjhies of each of the above.
Acorus calamus.	Boil with kalkam, strain.

Ther. use—Used internally and externally and as sternutatory; cures 80 kinds of disorders produced by the derangement of the wind humour.

PILLS AND TABLETS.

67. *Aksir-ai-Pachis*—

		Tolas.
Tabashir	Bambusa Arundinaceæ (Silicious concretions).	3
Gula-i-surakh	Red rose petals (dry)	3
Tukhmai-humaz	Rumex vesicarius	$1\frac{1}{2}$
Girda-i-samagh	Rhus coriaria (the thin pericarp of the seeds of samach).	$1\frac{1}{2}$
Tukhma-khurfa	Carum Roxburghi	$1\frac{1}{2}$
Gulnari	Punica granatum	2
Sumaga-i-arabi	Gum arabic	$1\frac{1}{2}$

Powder all the ingredients and make tablets with water about 2 mashas each.

Dose—One tablet twice a day.
Ther. use—In dysentery.

68. *Dashanga Guggulu*—

Chief ingredients are—

Trikatu.	The three acrids.
Triphala.	Do. myrabolans.
Chitraka.	Plumbago Zeylanicum.
Guggulu.	Balsamodendron Mukul.

Make into pills of 6 grs. each.

Dose—1 to 4 pills to be taken three times a day.

Ther. use—Alterative, tonic, stimulant; useful in obesity, in nervous and rheumatic affections.

69. *Hubbai-zeekhun natas*—(Asthma Pills No 1).

		Drams.
Bazrulbang	Hyoscyamus niger	4
Bool	Myrrh	4
Afioon	Opium	4
Oudailoban	Styrax benzoin	3
Jundai-badaster	Castoreum	3
Filfilai gird	Piper nigrum	3
Khakilai sigar	Lesser cardamum	3

Make pills about 1 grain each.

Dose—1 pill, thrice a day.

Ther. use—Relieves the spasm of bronchitis, good expectorant, also relieves constipation.

70. *Hubba-i-zee-khun-nafa*—(Asthma pills No. 2).

		Tola.
Garikoon	Agaricus Albus	1
Turbuda-i-sufeed	Ipomoea Turpethum	1
Shahama Hunzil	Colocynth pulp	$\frac{2}{3}$
Aslesoos	Glycyrrhiza glabra	$\frac{2}{3}$
Tariafeekhara	Iyarig pills	$\frac{2}{3}$
Muzarooth		2

Prepare 120 pills.

Dose—1 to 2 pills, thrice a day.

Ther. use—Relieves the spasm of asthma.

71. *Hubbai-shifa*—

Filfilai sufeed.	White pepper.
Bachnag.	Aconitum ferox.

Saturate in milk for three days.

Every day the milk to be changed. Fresh milk to be added. Grind the above drugs in ginger juice and make pills.

Dose—1 pill, three times a day.

Ther. use—It is said to check the periodical signs and symptoms of elephantiasis, viz., fever and swelling.

72. *Hubbai Jawahir*—

Butchnaka-i-mudabbir ..	Aconitum ferox	1 tola.
Shangraff	Hydrargyri bisulphuratum (Cinnabar).	1 „
Quranfil	Cloves	1 „
Jousbana	Nut of nutmeg (Myristica fragrans).	1 „
Bisbasa	Arillus of nutmeg (Myristica officinalis).	1 „
Akarkara	Anacyclus pyrethrum	1 „
Filfila Darnaz	Piper longum	1 „
„ Gird	Do. Nigrum	1 „
Saffron	Crocus sativum	½ „
Musk	..	1 masha.
Umber	A fragrant exudution	2 mashas.
Murvareed	(Powdered pearls)	½ tola.
Zahar moharrah	Bozoor (Mineral, a variety of silicate of magnesia and iron).	..
Maizena	Zea maize	¼ tola.
Silver leaves	..	½ „
Kharuba	Amber (picca succinifera)	½ „

Aconite must be boiled in fresh milk daily for 5 days, then washed well, its outer coat removed and then dried.

Powder with other ingredients and make pills about the size of a mustard with ginger juice.

Dose—1 pill for infants and children and two pills for adults twice a day.

Ther. use—Said to be useful in all the fevers accompanied by cold, running in the nose and headache, etc.

73. *Khurs-ai-mulaian*—

Gula-i-banufsha	Flowers of viola odorata	4 palams.
Rubbai-soos	Glycyrrhiza glabra	4 drams.
Sachmonia	Scamony	4 mishal.
Katira	Tragacanth	4 drams.
Nishasta	Starch	4 „

Powder all the ingredients and make tablets of 2 mashas each with (Isbogala) decoction.

Dose.—One tablet.

Ther. use—Said to be useful in constipation.

74. *Khursai Gull*—

Gulai-surakh.	Red rose petals.
Katira.	Tragacanth.
Badian.	Anisum sowa.
Tabashir.	Bambusa arundinacea (Silicious concretion)
Aslasoos.	Glycyrrhiza glabra.
Magvai-tikhmai-kaddu.	Pumpkin seeds.
Magzai Tukhnai-Khiar.	Cucumis utilissimus.

Take all the ingredients of the same weight, powder them well and make tablets of 1½ mashas each.

Dose—1 khurus twice a day.

Ther. use—Very useful in all intermittent fevers.

75. *Kasis Tablets*—

The chief ingredient is sulphate of iron.

Dose—1 to 5 tablets of 1 grain each to be taken twice a day after meals.

Ther. use—Tonic and hæmatinic.

76. *Pakshavadha Gugulu*—

Chief ingredients are—

Gugulu.	Balsamodendron mukul.
Triphala	The three myrabolans.
Yavani.	Carum copticum.
Sarshapa.	Brassica campestris.
Patha.	Cissampelos pareira.
Chitraka	Plumbago zeylanicum.
Hindu.	Asafœtida.
Indrayana.	Holarrhena antidysenterica.
Jiraka.	Cuminum cyminum.

Make into pills of 6 grains each.

Dose—1 to 4 pills to be taken three times a day.

Ther. use—Alterative, tonic; useful in paraplegia, hemiplegia and other paralytic affections.

77. *Sanjivani pills*—

Chief ingredients are—

Triphala.	The three myrabolans.
Shunti.	Zingiber officinalis.
Pippali.	Piper longum.
Bhallataka.	Semicarpus anacardium.
Aconite.	Aconitum ferox.
Vacha.	Acorus calamus.

Make pills of 1 grain each.

Dose—1 to 4 pills, three times a day.

Ther. use—Sedative and gastric stimulant; useful in indigestion, chronic diarrhœa, cholera.

78. *Trikatuadi Gutika*—

Chief ingredients are—

Lohah bhasmam.	Calcined iron.
Trikatu.	The three acrids.
Triphala.	Do. myrabolans.
Chitraka.	Plumbago zeylanica.
Musta.	Cyperus rotundus.
Vidanga.	Embelia ribes.

Dose—1 to 4 to be taken after meals with milk.

Ther. use—Tonic, alterative; useful in scrofula, phthisis, anæmia, dropsy, spermatorrhœa, diabetes, general debility, sexual debility.

Rasas.

79. *Arshakutara Rasa*—

Kajjali.	Cinnabar.
Tamra bhasma.	Calcined copper.
Loha „	„ iron.
Trikatu.	The three acrids.
Surana.	Amorphallus campanulatus.
Yavakshara.	Carbonate of potash.

Dose—1 to 4 pills, three times a day.

Ther. use—Alterative, tonic, laxative; useful in piles; gives tone to the body and keeps the bowels free.

80. *Gandamalakandan Rasa*—

Chief ingredients are—

Kajjali.	Cinnabar.
Tamra bhasmam.	Calcined copper.
Loha bhasma.	Do iron.
Kanchanar bark.	Bauhinia variegata.
Guggulu.	Balsamodendron mukul.

Dose—3 to 12 pills, twice a day.

Ther. use—Alterative, tonic, hæmatinic; useful in scrofulous affections; improves general health.

81. *Grahani Vajra Kapta Rasa*—

Dose—1 to 4 pills, three times a day with whey.

Ther. use—Antacid, alterative; useful in hyperacidity and relieves pain, discomfort and distention of the bowels.

82. *Kalakoota Rasa*—

Chief ingredients are—

Aconite.	Aconitum ferox.
Kajjali.	Cinnabar.
Tamra bhasma.	Calcined copper.
Manoshila.	Realgar.
Haratal.	Orpiment.
Chitrak.	Plumbago zeylanicum.
Triphala.	The three myrabolans.

Dose—1 to 3 pills, 3 times a day with betel leaves.

Ther. use—Useful in fevers with mental derangement; in high fever, it reduces the temperature, and when given during paroxysm, it acts as an antiperiodic.

83. *Lakshminarayan Rasa*—
Chief ingredients are—

Abhrak bhasma.	Calcined talc.
Rasasindura.	Mercuric oxide (red).
Vatsanabhi.	Aconitum ferox.
Kutuku	Picrorrhiza kurroa.
Katajatwiak.	Holarrhena antidysenterica (bark of).

Dose—1 to 3 pills, every three hours, during fevers.

Ther. use—Anodyne, antipyretic and diaphoretic; useful in convulsions, hemicrania and neuralgia.

84. *Lokanatha Rasa*—
Chief ingredients are—

Kajjali.	Mercury sulphide.
Abhrak bhasma.	Calcined talc.
Loha bhasma.	„ iron.
Tamra bhasma.	„ copper.

Dose—1 to 4 pills, to be taken three times a day with honey.

Ther. use—Useful in diseases of the liver and in dropsy and jaundice.

85. *Mehamudgara Rasa*—
Chief ingredients are—

Loha bhasmam.	Calcined iron.
Rasanjana.	Extract of Berberis aristata.
Darvi.	Berberis aristata.
Gokshura.	Tribulus terrestris.
Bilva.	Aegle marmelos.
Guggulu.	Balasamodendron mukul.

Dose—1 to 4 pills, to be taken twice a day after meals.

Ther. use—Tonic, antiperiodic, and alterative; useful in spermatorrhœa and other disorders of the urinary tract.

86. *Mahamriganka Rasa*—
Chief ingredients are—

Calcined gold..	1 part.
Red oxide of mercury	2 parts.
Calcined pearls	3 „
Sulphur	4 „
Swarnamakshika (Iron pyrites)	5 „
Calcined silver	6 „
Calcined coral	7 „
Calcined borax	2 „

Macerate all these for three days in the juice of Citrus acida, and make a ball of the mass. After having it dried in strong sunshine, insert it within a crucible, and roast it in the apparatus called Lavana Yantra for 12 hours. When cooled, add $\frac{1}{64}$ part by weight of diamond to the roasted ball and pound well into fine powder.

Dose—2 grains to be mixed in honey and given twice a day.

Ther. use—Said to be useful in consumption, hoarseness of voice, hectic fever, etc.

87. *Maha vaatha vidhwamsi Rasa*—

Mercury.	Hayya bhasmam.
Rajitha bhasmam.	Yemakshikam.
Abraka.	Loha bhasmam.
Kantha.	Pearl bhasmam.
Lead.	Mukthi bhasmam.
Tin bhasmam.	Gowri bhasmam.
Thalakam.	Shanka bhasmam.
Manoshila.	

All in equal parts. Rub in the juice of Kodukalli leaves for one day, in Yerukkumpal one day, and heat in valuka yantram.

Add equal parts of powdered aconite to the sublimate and grind in lime juice and also in manathakali (tomato) juice.

Dose—2 grains to be mixed with honey and given twice a day.

Ther. use—Useful in all rheumatic pains, abdominal dropsy, anorexia and asthma.

88. *Panchamrit Parpati*—
Dose—2 to 8 grains, to be taken twice a day.

Ther. use—Most efficacious medicine for sprue and chronic diarrhœa.

89. *Pradararipoo Rasa*—

Chief ingredients are—

Kajali.	Cinnabar.
Naga bhasma.	Calcined tin.
Rasanjana.	Extract of Berberis aristata.
Lodhra.	Symplocos racemosa.

Dose—1 to 4 pills, three times a day with rice water.

Ther. use—Tonic, astringent and alterative; useful in leucorrhœa and in chronic diarrhœa.

90. *Panchabana Rasa*—

The ingredients of Panchabana Rasa are mercury and sulphur, made into kajjali and pounded successively in the juice of the fruits of Phyllanthus Emblica, of grapes, of liquorice, and of date for one day each.

Dose—2 grains.

Ther. use—In general debility and in nervous exhaustion.

91. *Ratnagiri Rasa*—

Chief ingredients are—

Mercury	1 part.
Sulphur	1 ,,
Copper	1 ,,
Mica	1 ,,
Gold	1 ,,
Iron	½ ,,
Vaikranta	¼ ,,

Grind with the juice of Bhringaraja (Verbesina calandulacea); make like parpati by heating. Reduce it to powder; the powder is macerated, three times, in the expressed juice or decoction of the following one after another, viz.—Moringa pterygosperma, justicia adhatoda, vitex negundo, Acorus Calamus, the roots of Plumbago Zeylanica, Verbesina Calandulcea, Bhukadamba (Sphœranthus Hirtus), Solanum Xanthocarpum, Tinospra cordifolia, Sesbania aculeata, the flowers of Sesbania grandiflora, Gratiola moniera, Agathotes cheroyta, and also perfoliata. After this, enclose it in a crucible and heat in sand bath.

Dose—2 to 6 grains to be taken every three hours with dhanyak (Coriander) water until fever subsides.

Ther. use—Alterative, diaphoretic; useful in fevers.

As the preparation does not contain aconite, it can safely be given where aconite is contra indicated.

92. *Rasa Raja Rasam*—

Chief ingredients are—

Rasasindura (Mercuric oxide)	8 tolas.
Mica	2 ,,
Gold	1 ,,

Pound these together in the expressed juice of Aloe Indica, and add iron, silver, tin, physalis flexuosa, cloves, nutmeg flowers, and Kshirakakoli each half a tola. Pound all these again in the expressed juice of Solanum nigrum, and prepare pills.

Dose—2 grains.

Ther use—Said to be useful in all fevers.

93. *Shwasa Chinthamani Rasa*—

Chief ingredients are—

Loha bhasma.	Calcined iron.
Gandhaka.	Sulphur.
Abhrak bhasma.	Calcined talc.
Kajjali.	Mercury sulphide.
Makshika.	Iron pyrites.
Mukta.	Pearl.
Suvarna bhasmam.	Calcined gold.

Dose—1 to 4 pills, to be taken three times a day.

Ther. use—Alterative, tonic; useful in cough, asthma, phthisis, anæmia, chlorosis, general debility, etc.

94. *Vishva Tap Haran Rasa*—

The chief ingredients are—

Kajjali.	Mercuric sulphide.
Tamra bhasma.	Calcined copper.
Nux vomica.	
Croton seeds.	

Dose—1 to 4 pills with water when desired.

Ther. use—Purgative, diaphoretic and stimulant useful in chronic constipation, fever and chronic paralytic affections.

95. *Vatha Rakshasam*—

Kantha bhasmam.	Copper sulphate.
Naga „	Yemak-shikham.
Swarna „	Gowri bhasmam.
Silver „	Shankha bhasmam.
Rasa „	Burnt borax.
Abrak „	Mercuric sulphate.
Aconite bhasmam.	Haritharam.
Karpade „	Manoshila.
Croton.	Mercury.

Grind all these in ginger juice and heat in valuka yantram for three hours.
Dose—2 grains mixed with honey and given twice a day.
Ther. use—Paralysis, rheumatism, and malarial fever.

96. *Vatha vidhwamsi Rasa*—

Mercury, sulphur, tin bhasmam, copper bhasmam and iron bhasmam. Piper longum, Zingiber officinale, pepper, abrak bhasmam. All in equal parts. Aconite $1\frac{1}{2}$ parts.

Rub one day in each of the following juices :—

1. Plumbago juice.
2. Vella Khandankathri juice.
3. Chundakaya juice.
4. Vavilli juice.
5. Juice of the root of Datura stramonium.
6. Juice of Calatropis gigantea.
7. Ginger juice.
8. Lime juice.

Make pills to the size of one gundumani.

Dose—2 grains to be mixed in honey and given twice a day.
Ther. use—Useful in all rheumatic pains, abdominal dropsy, anorexia and asthma.

APPENDIX IV.

Index and summary of the notes of the medicines investigated.

Number and names of the drugs.	Notes of drugs.	Where obtained.	Diseases used in.	Total number of cases treated.	Remarks on results.
Single drugs.	No.				
1. Anamirta cocculus	1	Local ..	Ringworm	21	Useful in acute cases, not useful in chronic cases.
2. Alstonia scholaris	2	Do. ..	Malarial fevers	35	Acts as a mild anti-malarial.
3. Aegle marmelos (Bael) ..	3	B.C. Works, Calcutta.	Dysentery, diarrhœa and chronic enteritis.	16	Very useful.
4. Alpinia chinensis	4	Local ..	Bronchitis (acute and chronic).	1	Beneficial.
5. Agathi grandiflora	5	Do. ..	Constipation	5	Not useful.
6. Aristolochia bracteata ..	6	Do. ..	Round worms	25	Efficacious.
7. Aristolochia Indica	7	Do. ..	Malarial fevers ..	4	Unsatisfactory.
8. Amoora rohitaka	8	Do. ..	Enlarged liver and spleen.	7	Do.
9. Andropogon muricatus ..	9	Do. ..	Fevers	5	Useful.
10. Aplotaxis auriculata ..	10	Do. ..	Chronic rheumatism ..	7	Unsatisfactory.
11. Althae officinalis	11	Do. ..	Bronchitis and bronchial catarrh.	3	Useless.
12. Boerhaavia diffusa	12	Do. ..	Chronic Bright's disease with general dropsy.	2	Acts as a good diuretic.
13. Bryonia scabrella	13	Do. ..	Bronchitis and asthma ..	4	Action slow and unsatisfactory.
14. Corallocarpus epigœa .	14	Do. ..	Chronic enteritis and dysentery.	5	Beneficial.
15. Cassia occidentalis	15	Do. ..	Constipation	12	Useful.
16. Cassia sophera	16	Do. ..	Acute bronchitis	5	Gives relief.
17. Carthamus tinctorius ..	17	Do. ..	Constipation	18	Acts as a mild purgative.
18. Cassia fistula	18	Do. ..	Do.	18	Purgative.
19. Chirata	19	Do. ..	Malarial and other fevers.	16	Beneficial.
20. Clitorea ternatea	20	Do. ..	Constipation	15	Acts as a laxative.
21. Chavica roxburghi or long pepper.	21	Do. ..	Acute and chronic bronchitis.	10	Beneficial.
22. Cæsalpinia sappan (sappan wood).	22	Do. ..	Dysentery and diarrhœa.	9	Gives relief.
23. Coccinia Indica	23	Do. ..	Bronchial catarrh and bronchitis.	3	Useless.
24. Cordia myxa	24	Do. ..	Bronchitis	6	Do.
25. Cassia alata (ringworm shrub).	25	Do. ..	Ringworm of the body ..	31	Efficacious in acute cases; in chronic cases not useful.
26. Emblic myrabolans	26	Do. ..	Bronchitis	6	Gives relief.
27. Euphorbia neriifolia ..	27	Do. ..	Asthma	12	Do.
28. Eurycoma longifolia ..	28	Do. ..	Malarial fevers	8	Useful.
29. Erythrina Indica	29	Do. ..	Acute dysentery	5	Not useful.
30. Eugenia jambolans	30	Do. ..	Dysentery	10	Gives relief.
31. Fumaria parviflora	31	Do. ..	Fevers	11	Useless.
32. Hemidesmus Indicus ..	32	Do. ..	Debility after fevers and chronic rheumatism.	3	Efficacious in debility. In chronic rheumatism not useful.
33. Holarrhena-antidysenterica.	33	Do. ..	Dysentery	20	Very efficacious.
34. Hyssopus officinalis	34	Do. ..	Asthma and chronic bronchitis.	32	Beneficial.
35. Indigofera aspalathoides ..	35	Do. ..	Secondary syphilis and psoriasis.	6	Useless.
36. Luffa amara	36	Do. ..	Asthma	12	Gives relief.
37. Michelia champaca	37	Do. ..	Chronic gastritis	16	Useful
38. Mesua ferrea	38	Do. ..	Dysentery	24	Mild cases cured, severe cases not useful.
39. Melia azadirachta	39	Do. ..	Chronic skin diseases (itch), boils and eczema.	6	Gives relief.
40. Mallotus philippensis ..	40	Do. ..	Round worms and thread worms.	25	Efficacious.
41. Malva sylvestris	41	Do. ..	Bronchial catarrh and bronchitis.	7	Useless.
42. Melia azadarach	42	Do. ..	Dyspepsia and malarial fever.	19	An efficient bitter tonic, but no malarial property.
43. Nelumbium speciosum ..	43	Do. ..	Dysentery	8	Efficacious.
44. Oldenlandia herbaceæ ..	44	Do. ..	Malarial fevers and jaundice.	9	Malarial fevers not satisfactory; jaundice cured.
45. Oldenlandia umbellata ..	45	Do. ..	Bronchitis and asthma ..	23	Bronchitis useful. Asthma gives relief.
46. Odina wodier	46	Do. ..	Diarrhœa and dysentery..	23	Useless.
47. Pistia stratiotes	47	Do. ..	Chronic skin disease ..	6	Gives relief.
48. Psoralia corylifolia	48	Do. ..	Ringworm	6	Beneficial.
49. Pinus deodara	49	Do. ..	Chronic fevers	13	Useless.
50. Plantago ispaghula	50	Do. ..	Specific urethritis	4	Useful.
51. Rhus succedanea	51	Do. ..	Infantile diarrhœa and dysentery.	18	Beneficial.
52. Saraca Indica	52	Do. ..	Puerperal diseases and menorrhagia.	12	Do.

Index and summary of the notes of the medicines investigated—*cont.*

Number and names of the drugs.	Notes of drugs.	Where obtained.	Diseases used in.	Total number of cases treated.	Remark on results.
Single drugs—cont.	No.				
53 Scindapsus pertusa	53	Local ..	Asthma	4	Acts as an expectorant, no action on the asthmatic spasm.
54. Smilax chinensis	54	Do. ..	Chronic and subacute rheumatism.	8	Unsatisfactory.
55. Soymida febrifuga	55	Do. ..	Malarial fevers	24	Beneficial.
56. Sphæranthus hirtus ..	56	Do. ..	Specific urethritis.. ..	1	Useless.
57. Solanum ferox	57	Do. ..	Fevers	6	Do.
58. Solanum trilobatum or trifoleatum.	58	Do. ..	Acute and chronic bronchitis	4	Useful.
59. Solanum Indicum	59	Do. ..	Bronchitis attended with fever	11	Useless.
60. Solanum jacquini	60	Do. ..	Asthma and bronchitis ..	6	Do.
61. Terminalia arjuna	61	Do. ..	Dropsy arising from heart troubles and valvular diseases of the heart.	15	Not useful.
62. Tinospora cordifolia.. ..	62	Do ..	Malarial fevers	23	Action slow.
63. Tephrosia purpurea	63	Do.	Bright's disease with dropsy.	7	Acts as a diuretic in a mild degree.
64. Tylophora asthmatica (country ipecac).	64	Do. ..	Dysentery, asthma and bronchitis.	13	Beneficial.
65. Tragia cannabina	65	Do. ..	Bronchitis	13	Useful.
66. Vernonia anthelmintica ..	66	Do. ..	Round worms	148	Satisfactory.
Arishtas.					
1. Abhaya arishtam	1	Arya-Vydyasala, Kotakkal.	Atonic dyspepsia and constipation . ..	11	Slightly useful.
2. Pippali arishta	2	Zandu Pharmacy, Bombay.	Bronchitis and asthma ..	4	Gives relief.
Asavas					
3. Kanaka asava	3	Do.	Asthma	20	Beneficial.
4. Kumari asava	4	Do.	Do.	12	Do.
Avalehas, Grithams, Syrups and confections.					
5. Asoka gritham	5	Do.	Menorrhagia and leucorrhœa.	5	Beneficial.
6. Annos-daroo	6	Local ..	Dyspepsia	5	Useful.
7. Agastya rasayanam	7	Arya-Vydyasala, Kotakkal.	Chronic bronchitis associated with asthma and emphysema.	6	Beneficial.
8. Confection Dhaiphal ..	8	..	Dysentery	21	Satisfactory.
9. Dhatravavaleha	9	Zandu Pharmacy, Bombay.	Chronic bronchitis ..	3	Gives relief.
10. Dava-ul-musk	10	Local ..	Neurasthenia	1	Useful.
11. Gulguluthikthakam	11	Arya-Vydyasala, Kotakkal.	Chronic psoriasis	4	Do.
12. Javarish-ai-amila	12	Local ..	Stomatitis, gastritis and atonic dyspepsia.	6	Gives relief.
13. Javarish-ai-sulamani ..	13	Do. .	Atonic dyspepsia . ..	4	Do.
14. Javarish-ai-thurush	14	Do. ..	Chronic gastritis and in atonic dyspepsia.	5	Useful.
15. Kantakari avaleha	15	Zandu Pharmacy, Bombay.	Asthma and bronchitis ..	12	Beneficial.
16. Khamair-ai-abrashim :	16	Local ..	Nervous palpitation of the heart	2	Useful.
17. Laboobai sagheer	17	Do. ..	Neurasthenia	6	Useless.
18. Mamsa sarpishi	18	Arya-Vydyasala, Kotakkal.	Epilepsy	3	Do.
19. Majoonai mussafi	19	Local ..	Habitual constipation and skin diseases.	6	Useless.
20. Majoonai saal	20	Do. ..	Bronchial catarrh and mild cases of bronchitis.	9	Useful.
21. Majoonai-malarial fever ..	21	Do. ..	Malarial fevers	18	Useless.
22. Mahatiktha ghritham ..	22	Zandu Pharmacy, Bombay.	Chronic skin diseases ..	10	Useful.
23. Mahjum-e-tel	23	Local ..	Painful dyspepsia ..	24	Unsatisfactory.
24. Madhusnuhi rasayanam ..	24	Arya-Vydyasala, Kotakkal.	Chronic psoriasis ..	9	Useful.

Index and summary of the notes of the medicines investigated—*cont.*

Number and names of the drugs.	Notes of drugs.	Where obtained.	Diseases used in.	Total number of cases treated.	Remarks on results.
Avalehas, Grithams, Syrups and confections—cont.	No.				
25. Neelini gritham	25	Arya-Vydyasala, Kotakkal.	Dysmenorrhœa	4	Unsatisfactory.
26. Panchagaviya Ghritham ..	26	Do.	Epilepsy	1	*Not useful.*
27. Syrupus-Hyssopus officinalis.	27	Local .	Dyspepsia chronic bronchitis, asthma and amenorrhœa	61	Useful. In amenorrhœa useless.
28. Syrup Brahmi	28	B.C. Works, Calcutta.	Epilepsy	3	Useful.
Bhasmams.					
29. Abrak bhasmam (Calcined 1000 times)	29	Zandu Pharmacy, Bombay.	Diabetes mellitus ..	2	Useful.
30. Naga bhasmam	30	Do.	Asthma	12	Beneficial.
31. Thalaka bhasmam	31	Arya-Vydyasala, Kotakkal.	Bronchitis attended with fever.	33	Do.
32. Sringa bhasmam	32	Do.	*Specific urethritis*	95	Not useful.
33. Vanga bhasmam	33	Do.	Gonorrhœa	9	Useful.
34. Yasada bhasmam	34	Do.	Chronic gastritis . ..	6	Gives relief.
Churnams.					
35. Bhoonimbadi churnam ..	35	Zandu Pharmacy, Bombay.	Chronic diarrhœa, dysentery and chronic gastritis.	23	Useful but the action is slow.
36. Chaturushana churnam ..	36	Do.	Flatulence and intestinal colic.	21	Useful.
37. Jatipaladhi churnam ..	37	Do.	Asthma, lumbago and menorrhagia.	21	Beneficial.
38. Katphaladhi churnam ..	38	Local ..	Dysentery	8	Useful.
39. Kappithashtaka churnam	39	Zandu Pharmacy, Bombay.	Acute dysentery	14	Do.
40. Madanadhivaman	40	Do.	Acute cases of bronchitis and asthma.	66	Efficacious.
41. Compound powder of smilax chinensis .. .	41	Local ..	Rheumatism chronic ..	8	Not useful.
42. Narashimha churnam ..	42	Zandu Pharmacy, Bombay.	Atonic dyspepsia and myalgia.	5	Gives relief.
43. Pushyanuga churnam ..	43	Do.	Menorrhagia and leucorrhœa.	13	Do
44. Panchakola churnam ..	44	Local ..	Atonic dyspepsia, bronchial catarrh and bronchitis.	12	Do.
45. Panchanimba churnam ..	45	Do. ..	Convalescence after malarial fevers.	75	Beneficial.
46. Saffi-fai-siah	46	Do. ..	Acute dysentery	13	Efficacious.
47. Shringyadhi churnam ..	47	Zandu Pharmacy, Bombay.	Infants suffering from diarrhœa and bronchial troubles.	84	Beneficial.
48. Suranadhi churnam	48	Arya-Vydyasala, Kotakkal.	Piles and dysentery ..	6	Useless.
49. Shadushana churnam ..	49	Local ..	Flatulence and intestinal colic, bronchial and nasal catarrh.	8	Useful.
50. Vaishavanar churnam ..	50	Zandu Pharmacy, Bombay.	Indigestion, loss of appetite and flatulent dyspepsia with eructuations	22	Beneficial.
51. Vadavanal churnam ..	51	Do.	Chronic gastritis	16	Useful.
Decoctions or quaths.					
52. Bharangyadhi kashayam ..	52	Local .	Asthma	18	Gave relief.
53. Calatropis gigantea (C.D.) ..	53	Zandu Pharmacy, Bombay.	Bronchitis and influenza.	20	Efficacious.
54. Kalingakadi (C.D.)	54	Zandu Pharmacy, Bombay.	Malarial fever	19	Not useful.
55. Terminalia Arjuna	55	Do.	Valvular diseases of the heart.	6	Do.
56. Dasamoola (panchakoladhi kashayam.	56	Arya-Vydyasala, Kotakkal.	Ascites with cirrhosis of the liver.	10	Useful.
57. Pathyadhi quath	57	Zandu Pharmacy, Bombay.	Convalescence after fever and hemicrania.	15	Do.
58. Sabacharadhi kashayam ..	58	Arya-Vydyasala, Kotakkal.	Chronic rheumatism ..	4	Unsatisfactory

Index and summary of the notes of the medicines investigated—*cont.*

Number and names of the drugs.	Notes of drugs.	Where obtained.	Diseases used in.	Total number of cases treated.	Remarks on results.
Decoctions or quaths—cont.	No.				
59. Shadanga panayam	59	Local ..	Fevers	7	Beneficial.
60. Vidarigandhadigana quath ..	60	Zandu Pharmacy, Bombay.	Influenza and bronchitis..	7	Do.
Ointments, liniments or lepas.					
61. Avalgujadi lepa	61	Zandu Pharmacy, Bombay.	Ringworm	..	Useful.
62. Kusthadi lepa	62	Do.	Do	41	Useful.
63. Kursh-ai-kuba	63	Local ..	Different varieties of taenia.	6	Do.
64. Dhanwantri thailam (21 times and 101 times boiled).	64	Arya-Vydyasala, Kotakkal.	Rheumatism and neuralgia.	4	Useful in neuralgia, useless in rheumatism.
65. Paradadi ointment	65	Zandu Pharmacy, Bombay.	Ringworm of the scalp ..	20	Useful.
66. Prabhanjana vimardhana ..	66	Arya-Vydyasala, Kotakkal.	Sciatica and neuritis ..	4	Gives relief.
Pills.					
67. Khursai-aksirai-pachis ..	67	Local ..	Acute dysentery and mucous enteritis.	5	Useful.
68. Dashanga guggulu	68	Zandu Pharmacy, Bombay.	Chronic rheumatism ..	2	Not useful.
69. Hubbai-jee-khun-nafas (Asthma pills No. 1).	69	Local ..	Asthma	6	Gives relief.
70. Hubbai-jeekhun-nafas (Asthma pills No. 2).	70	Do. ..	Do.	6	Useful.
71. Hubbai-shafa.	71	Do. ..	Filarial fever	3	Do.
72. Hubbai-javahir	72	Do. ..	Catarrh and inflammation of the mucous membrane of air passages attended with fever.	18	Very beneficial.
73. Khurs-ai-mulaian .. .	73	Do. ..	Constipation	72	Useful.
74. Khurs-ai-gull	74	Do. ..	Intermittent fever ..	10	Useless.
75. Kasis tablets	75	Zandu Pharmacy, Bombay.	Amenorrhœa	18	Useful.
76. Pakshavadha gugulu ..	76	Do.	Hemiplegia	2	Not useful.
77 Sanjivini pills	77	Do.	Indigestion and chronic diarrhœa.	5	Useful.
78. Trikatukadhi gutika.. ..	78	Do.	Tubercular phthisis ..	2	Slightly useful.
Rasas.					
79. Arshakutara rasa	79	Zandu Pharmacy, Bombay.	Bleeding piles	4	Acts as a gentle laxative, had no effect on the bleeding.
80. Gandamalakandan rasa ..	80	Do.	Tubercular glands ..	13	Not useful.
81. Grahani vajra kapat rasa ..	81	Do.	Chronic enteritis	11	Gives relief.
82. Kalkoota rasa.	82	Do.	Fever with delirium ..	2	Useful.
83. Laxminarayana rasa ..	83	Do.	Hemicrania and other forms of neuralgia.	32	Do.
84. Lokanatha rasa	84	Do.	Dropsy, as a result of dilatation of the heart.	4	Gives relief.
85. Mehamudgara rasa	85	Do.	Malarial fevers .. .	13	Useful.
86. Maha Mriganka rasa ..	86	Local ..	Phthisis	13	Do.
87. Maha vathavidhwamsi rasa..	87	Do. ..	Chronic rheumatism ..	17	Slow in action but useful.
88. Panchamrita parpati ..	88	Zandu Pharmacy, Bombay.	Chronic enteritis and diarrhœa.	3	Useful.
89. Pradararipoo rasa	89	Do.	Leucorrhœa and in chronic diarrhœa.	30	Efficacious.
90. Panchbana rasa	90	Local ..	Sexual and general debility.	10	Useful.
91. Ratnagiri rasa	91	Zandu Pharmacy, Bombay.	Malarial fever	12	Efficacious.
92. Rasa raja rasam	92	Local ..	Typhoid fever	2	Useful.
93. Shwasa Chinthamani rasa ..	93	Zandu Pharmacy, Bombay.	Asthma	11	Do.
94. Vashava Tapa Harana rasa.	94	Do.	Constipation	35	Acts as a good purgative.
95. Vatha rakshasam	95	Local ..	Malarial fever	49	Useful
96. Vatha vidhwamsi rasa .	96	Do. ..	Chronic rheumatism ..	24	Useless.

APPENDIX V.

Statement showing the diseases treated by Ayurvedic and Unani medicines from 1st January to 31st August 1920.

	Names of the diseases treated.	Total No. of patients treated.
1.	Asthma	139
2.	Bronchial catarrh	I52
3.	Coryza	5
4.	Acute bronchitis	169
5.	Chronic bronchitis	14
6.	Tubercular phthisis	4
7.	Pneumonia	5
8.	Palpitation of the heart	3
9.	Valvular diseases of the heart	6
10.	Influenza	45
11.	,, broncho-pneumonia	7
12.	Gastric catarrh	14
13.	Colic intestinal	19
14.	Atonic dyspepsia	10
15.	Chronic gastritis	174
16.	Dilatation of stomach	2
17.	Constipation	294
18.	Acute and chronic diarrhoea	172
19.	Chronic enteritis	6
20.	Dysentery (acute and chronic)	252
21.	Hæmorrhoids	6
22.	Pyrexia of uncertain origin	83
23.	Remittent fever	7
24.	Typhoid fever	2
25.	Epilepsy	7
26.	Lateral sclerosis	1
27.	Hemiplegia	14
28.	Hemicrania	18
29.	Myalgia	43
30.	Sciatica	6
31.	Facial paralysis	1
32.	Lumbago	8
33.	Neurasthenia	15
34.	Diabetes inspidus	1
35.	,, mellitus	2
36.	Tænia	124
37.	Psoriasis	21
38.	Scabies	113
39.	Chronic skin diseases	28
40.	Alopæcia	1
41	Eczema	9
42.	Prurigo	5
43.	Ascaris lumbricoides	215
44.	Tape worm	6
45.	Menorrhagia	22
46.	Dysmenorrhœa	29
47.	Leucorrhœa	15
48.	Amenorrhœa	18
49.	Gonorrhæa	20
50.	Gleet	4
51.	Syphilis	7
52.	Chronic rheumatism	78
53.	Gonorrhœal rheumatism	20
54.	Acute Bright's disease	2
55.	Chronic Bright's disease	2
56.	Anæmia from ankylostomiases	6
57.	,, dropsy	4
58.	Malarial fever	450
59.	Catarrhal jaundice	14
60.	Cirrhosis of the liver and ascites	6
61.	Locomotor ataxy	2
62.	Biliousness	20
63.	Infantile biliary cirrhosis	5
64	Dilatation of the heart	1
65.	Leprosy	30
66.	Lymphatic fever and elephantiasis	11
67.	Scrofula (tubercular glands)	13
	Total	3,007

APPENDIX VI.

The following single and compound drugs already mentioned in my first or second report have been given a further extended trial and I have here only to confirm what I have mentioned about their therapeutical actions in the notes attached to those two reports :—

Single drugs.

1. Trichosanthes Palmata.
2. Aconitum Heterophyllum.
3. Tinospora cordifolia.
4. Vernonia Anthelmintica.
5. Cleome Viscosa.
6. Euphorbia Pilulifera.
7. Oldenlandia Hernandifolia.
8. Ailanthus Malabaricum.
9. Picrorrhiza Kurroa.
10. Terminalia Arjuna.
11. Alstonia Scholaris.
12. Calotropis gigantea and procera.
13. Zingiber officinale.

Basmams.

14. Abrak Bhasmam (calcined 100 times).
15. Tamra Bhasmam.
16. Vanga Bhasmam.
17. Annabedhi Sindhuram.

Churnams or powders.

18. Rohitaka Churnam.
19. Gangadhara Churnam.
20. Kalyanksharam.
21. Sudarsana Churnam.
22. Kirmani.
23. Swayamagni.
24. Constipation powder (Unani).
25. Avipatikar Churnam.
26. Aswaghandha Churnam.

Ointments, Thailams, etc.

27. Adithyapaka Thaila.
28. Dadrughna ointment.
29. Vidanga Thaila.
30. Vishagharbha Thaila.

Pills.

31. Abhya modak.
32. Kanchanar Gugulu.
33. Yogaraj Gugulu.
34. Rasna Gugulu.
35. Mandura Vati.
36. Pranadhi gutika.
37. Punarnava Mandura.
38. Chandraprabha gutika.

Rasas.

39. Jatiphaladhi gutika.
40. Mriganka Rasa.
41. Mrithyunjaya Rasa.
42. Vathagni Kumaran.
43. Naracha Rasa.
44. Shanka vati.
45. Shwasakutara Rasa.
46. Ekangavera Rasa
47. Thribhuvana Keerti Rasa.
48. Devakusumadhi Rasa.
49. Pancha Vakra Rasa.
50. Smriti-sagara Rasa.
51. Agni-sooti Rasa.
52. Vatari Rasa.
53. Nithyanandha Rasa.
54. Krimimudgara Rasa.
55. Arogiavardhini pills.

Ghrithams.

56. Mahatiktha Ghritham.

Quaths.

57. Amritadhi.
58. Saptaparna.
59. Dasamoola.

Succus.

60. Eclipta Prostrata.

Notes on treatment of Leprosy.

I append a statement of leper patients treated with Hydnocarpus inebrians. In the notes on this drug, in my second report, I remarked " I have no doubt that Hydnocarpus inebrians is a potent drug for ameliorating the loathsome complications of leprosy." From the appended statement it will be evident that I have not been wrong in making that remark. Since writing the second report, thirty leper patients with characteristic signs and symptoms have been under treatment for varying periods. Only in a few of these, lepra bacilli were found in nasal discharges. From what I have seen of the results of the treatment, I must say they are very encouraging. One of them has almost completely recovered Looking at him now, it will be difficult to say that he had previously suffered from the disease, if not for the contractures of the fingers of one hand which the disease has left behind. This patient had two perforating ulcers, one on each foot and several anæsthetic patches all over the body. He is now able to attend to his avocations as a Sanskrit Pandit. Eleven other patients have improved very much under treatment. I have marked as stationary, all those patients who have come under treatment recently, i.e., within the last two months. The treatment adopted in all these cases, except one, is the same as that mentioned in my second report, viz., preliminary purgation by purified powdered croton seeds for eight to ten days, thereafter ten minims doses of oleum Hydnocarpus inebrians in the morning, and 20 grains of confection of the kernel of the seeds of Hydnocarpus inebrians in the evening. One patient, in addition to the above treatment, is being given twice a week subcutaneous injections of solution of sodium Hydnocarpate (2 C.C.) prepared at the Chemical Examiner's laboratory. This patient is rapidly improving although he has been under treatment only for ten weeks. Most of the patients are still under treatment. These include four brothers aged 6 to 13 years. Their father who was a leper died two years ago of acute dysentery.

APPENDIX VII.

Summarised statistics of leprosy treatment.

	Number of cases treated with oleum Hydnocarpus inebrians and python's fat.				Number of cases treated with oleum Hydnocarpus and confection.				Number of cases treated with injections of sodium Hydnocarpate.				Duration of disease.	Length of treatment.	Dose of Hydnocarpus and python's fat.	Dose of oleum Hydnocarpus and confection	Dose of sodium Hydnocarpate for injection.	Total number of cases treated.	Result.											
																			Oleum Hydnocarpus and python's fat.				Oleum Hydnocarpus and confection Hydnocarpus.				Injection of sodium Hydnocarpate.			
	Anaesthetic.	Mixed.	Nodular.	Total.	Anaesthetic.	Mixed.	Nodular.	Total.	Anaesthetic.	Mixed.	Nodular.	Total.							Worse.	Stationary.	Slightly improved.	Considerably improved.	Worse.	Stationary.	Slightly improved.	Much improved	Worse	Stationary.	Slightly improved.	Much improved.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
1. Leper Hospital, Rayapuram.*	7	3	..	10	..	..	..	.	..	..	..	..	8 to 20 yrs.	4 months.	5 to 60 drops.	..	..	10*	..	.	2	4	.	..	..	..	..	..	.	..
2. Out-cases ..	..	..	..	..	29	..	..	20	..	..	..	..	6 months to 12 years.	1 to 12 months.	..	10 drops of oil and 20 grains of confection.	..	29	..	..	..	..	..	9	9	11	..	..	..	..
3. Do.† ..	..	..	..	..	..	..	..	..	1	..	.	1	10 years.	10 weeks.	..	..	2 C C.	1†	..	..	..	..	..	..	..	..	..	..	..	1
Total ..	7	3	..	10	29	..	..	29	1	..	..	1	..	..	..	..	..	40	..	..	2	4	..	9	9	11	.	..	..	1†

* Three cases left the hospital, and the other case refused treatment.
† Steadily improving.

APPENDIX VIII.

List of drugs investigated from the commencement of investigation to 31st August 1920.

First report.

1. Bombax malabaricum.
2. Bambusa Arundinacea.
3. Holarrhena anti-dysenterica.
4. Cleome Viscosa.
5. Aconitum Heterophyllum.
6. Adahatoda Vasica.
7. Semi carpus Anacardium.
8. Withania Somnifera.
9. Ipomea Turpethum.
10. Eclipta prostrata.
11. Butea frondosa.
12. Vanda Roxburghii.
13. Gugulu.
14. Oxalis corniculata.
15. Silajatu.
16. Sida cordifolia.
17. Phyllanthus emblica.

Second report.

18. Alstonia scholaris.
19. Asparagus racemosus.
20. Anisomeles malabaricum.
21. Anacyclus pyrethrum.
22. Areca catechu.
23. Acorus calamus.
24. Adenema Hyssopufolia.
25. Andrographis paniculata.
26. Acalypha Indica.
27. Artemisia maritima.
28. Ailanthus malabaricum.
29. Astercanthus Longifolia.
30. Amoora Rohithaka.
31. Bœrhavia diffusa.
32. Berberis aristata.
33. Brassica campestris.
34. Clerodendron serrata.
35. Cardiospermum halicacabum.
36. Croton Tiglium.
37. Casia tora.
38. Coscinum fenestratum.
39. Calotropis gigantea and Procera.
40. Cæsalpinia Bonducella.
41. Cassia Auriculata.
42. Chenopodium Ambrosioides (seeds).
43. Colycopterus floribunda.
44. Dæmia extensa.
45. Evolvulus alsinioides.
46. Embelia Ribes.
47. Euphorbia Pillulifera.
48. Gudumal.
49. Gloriosa superba.
50. Hydnocarpus inebrians.
51. Herpestis monniera.
52. Hypoxis orchioides.
53. Hydrocotyle asiatica.
54. Lipia Nodiflora.
55. Lodoicea soychallarum.
56. Melia Azadirachta.
57. Nigella sativum.
58. Ocimum sanctum.
59. Picrorrhiza kurroa.
60. Plumbago zeylanicum.
61. Podophyllum Emodi.
62. Pedalium murex.
63. Ruta Augustifolia.
64. Salamisri.
65. Toddalia Aculeata.
66. Trichosanthes cucumerina.
67. Trichosanthes Palmata.
68. Terminalia Arjuna.
69 Taxus Baccata
70. Thespesia populnea.
71. Tinospora cordifolia.
72. Tribulus terrestris.
73. Urginea Indica.
74. Viola odorata.
75 Vernonia Anthelmintica.
76. Vernonia cinera.
77. Valeriana Indica.
78. Woodfordia floribunda.
79. Zingiber officinale.
80. Ophiorrhiza mungosa.
81. Gomuthram or cow's urine.

Third report.

82. Anamirta cocculus.
83. Alstonia scholaris.
84. Aegle Marmelos.
85. Alpinia Chinensis.
86. Agathi Grandiflora.
87. Aristolochia bracteata.
88. Aristolochia Indica.
89. Amoora Rohitaka.
90. Andropogon Muricatus.
91. Aplotaxis auriculata.
92. Althæ officinalis.
93. Bœrhaavia diffusa.
94. Bryonia scabrella.
95. Corallocarpus Epigœa.
96. Cassia occidentalis.
97. Cassia sophera.
98. Carthamus Tinctorius.
99. Cassia fistula.
100. Chirata.
101. Clitorea Ternatea.
102. Chavica Roxburghi or long pepper.
103. Cæsalpinia sappan (sappan wood).
104. Coccinia Indica.
105. Cordia myxa.
106. Cassia alata (ringworm shrub).
107. Emblic myrabolans.
108. Euphorbia Neriifolia.
109. Eurycoma Longifolia
110. Erythrina Indica.
111. Eugenia jambolans.
112. Fumaria parviflora.
113. Hemidesmus Indicus.
114. Holarrhena antidysenterica.
115. Hyssopus officinalis.
116. Indigofera aspalathoides.
117. Luffa Amara.
118. Michelia Champaca.
119. Mesua Ferrea.
120. Melia Azadirachta.
121. Mallotus Philippensis.
122. Malva Sylvestris
123. Melia azadarach.
124. Nelumbium speciosum.
125. Oldenlandia Herbaceæ.
126. Oldenlandia Umbellata.
127. Odina wodier.
128. Pistia Stratiotes.
129. Psoralia corylifolia.
130. Pinus Deodara.
131. Plantago Ispaghula.
132. Rhus Succedanea.
133. Saraca Indica.
134. Scindapsus pertusa.
135. Smilax chinensis.
136. Soymida febrifuge.
137. Sphæranthus Hirtrus.
138. Solanum ferox.
139. Solanum Trilobatum or trifoleatum.
140. Solanum Indicum.
141. Solanum jacquini.
142. Terminalia Arjuna.
143. Tinospora cordifolia.
144. Tephrosia purpurea.
145. Tylophora asthmatica (country ipecac)
146. Tragia Cannabina.
147. Vernonia Anthelmintica.

List of compound preparations investigated from the commencement of investigation to 31st August 1920.

First Report.

1. Karpooradhi Churnam.
2. Talisyadhi Churnam.
3. Worm powder.
4. Trivrit Churnam.
5. Anandha Bhairavi.
6. Dadhumashtaka Churnam.
7. Leghu Sudarsana Churnam.
8. Brihat Sudarsana Churnam.
9. Panchthikthaka Panakam.
10. Zoofa.
11. Kutajapanithum.
12. Bhaskara Lavanam.
13. Leghu sanka Dravakam.
14. Ithraphal
15. Jawarish-ai-kamoon.
16. Sidha Bhasmam.
17. Purnachandrothayam.
18 Narayana Thailam.
19. Agnithundi pills.
20. Specific powder.
21. Panchathikthaka decoction.
22. Loha Bhasmam.
23. Specific oil for syphilis.
24. Do. for diabetes mellitus.
25. Vathagni Kumaran.
26. Iron Kalpam.
27. Decoction Glycyrrhiza Co.
28. Yogaraja Guggulu.
29. Swatchanda Bhairavi pills
30. Nellikaya Leghyam.

Second Report.

31. Abbrak Bhasmam.
32. Ooral Basmam.
33. Mukti Basmam:
34. Makshika Basmam.
35. Raupya Basmam.
36. Tamra Bhasmam.
37. Annabedhi sindhuram.
38. Ashta Churnam.
39. Avipatikar Churnam.
40. Arkamoola Churnam.
41. Chithrakamuladhi Churnam.
42. Unani compound cough powder.
43. Compound constipation powder.
44. Eladi Churnam.
45. Gangadhara Churnam.
46. Kalyanaksharam.
47 Lavangadhi Churnam.
48 Musalyadhi Churnam.
49. Powder for inhalation in influenza.
50. Rohitaka Churnam.
51. Swayamagni.

Second Report—cont.

52. Swadishta Virechena.
53. Saraswathi Churnam.
54. Amritha Bhallataki.
55. Amritha Prasa ghritha.
56. Abhyamaliki.
57. Aazai-raisah
58. Brahmi ghritham
59. Chyavanaprash.
60. Dasamoola Rasayanam.
61. Lashunadhi Ghritham.
62. Majoonai Khuvathiaibha or manly power.
63. Kushmanda Rasayanam.
64. Shrirag.
65. Abhyadhi quath.
66. Dasamoola quath.
67. Gudoochyadhi quath.
68. Drakshasava.
69. Kutajarishta.
70. Loha asava.
71. Adithyapaka Thaila.
72. Aswaghandha Bala Lakshadi Thaila.
73. Chakramardha Thaila.
74. Dadrughna ointment.
75 Ksheerabala oil.
76. Compound oil of vitex negundu.
77. Panchavalkaladi Thailam.
78. Vidanga Thaila.
79. Vishagarbha Thaila.
80. Abhayadi modak.
81. Amritha Gugulu.
82. Chandraprabha Gutika.
83. Dhanwantari pills.
84. Gokshuradhi Gugulu.
85. Mandura Loha.
86 Punarnava Manduram
87. Shoathahar Loha.
88. Trayodashanga Gugulu.
89. Yogaraja gugulu.
90. Agnithundi Rasa.
91. Agni Rasa.
92. Agnisooti Rasa.
93. Arogyavardhini pills.
94. Agnikumara Rasa.
95. Brihat Chandrodayā Makardhwaja.
96. Devakusumadi Rasa.
97. Ekangaveera Rasa.
98. Jatiphaladhi Gutika.
99. Jaladorara Rasa.
100. Krimimudgara Rasa.
101. Kanakasundara Rasa.
102. Lakhshmi vilas Rasa.
103. Mriganka Rasa.
104. Mahamrithyanjaya Loha.
105. Mahalakshmivilasa Rasa.
106. Maha Jwarankusa.
107. Mrithyunjaya Rasa.
108. Nithyananda Rasa.
109. Naracha Rasa.
110. Narayan Jwarankusa.

Third Report.

111. Panchavakra Rása.
112. Ramban Rasa.
113. Shwasakutara Rasa.
114. Sarwanga Sundara Rasa.
115. Smritisagara Rasa.
116. Sanka Rasa.
117. Tribhuvan Keerti Rasa.
118. Trailokia Chinthamani Rasa.
119. Vatari Rasa
120. Vadavanal Rasa.
121. Vatharakthauthaka Rasa.
122. Vasanta Kusumakar Rasa.
123. Maha Yogaraja Guggulu.
124. Chathurmuka Rasa.
125. Mahatiktha Ghritham.
126. Pranadhi gutika.
127. Rasna Gugulu.
128. Kanchanar Guggulu.
129. Chandrodayan No. I (Suvarna Ghatit Makharadhwaj).

Aristas—

130. Abhaya arishtam.
131. Pippali Arishta.

Asavas—

132. Kanaka asava.
133 Kumara asava.

Avalehas, Ghrithams, syrups and confections—

134. Asoka Ghritham.
135. Annos-daroo.
136. Agastya rasayanam.
137. Confection Dhaiphal.
138. Dhatryavaleha.
139. Dava-ul-musk.
140. Gulgulu thikthakam.
141. Javarish-ai-amila.
142. Javarish-ai-sulamani.
143. Javarish-ai-thurush.
144. Kantakari Avaleha.
145. Khamair-ai-Abrashim.
146. Laboobai sagheer.
147. Mamsa sarpishi.
148. Majoonai mussifi.
149. Majoonai sual.
150 Majoonai-malarial fever.
151. Mahatiktha ghritham.
152. Mahjum-e-tel.
153. Madhusnuhi rasayanam.
154. Neelini ghritham.
155. Panchagaviya ghritham.
156. Syrupus hyssopus officinalis.
157. Syrup brahmi.

Bhasmams—

158. Abrak Bhasmam.
159. Naga Bhasmam.
160 Thalaka Bhasmam.
161. Shringa Bhasmam.
162. Vanga Bhasmam.
163. Yasada Bhasmam.

Third Report—cont.

Churnams—
164. Bhoonimbadi Churnam.
165. Chaturushana Churnam.
166. Jatipaladhi Churnam.
167. Katphaladhi Churnam.
168. Kapithashtaka Churnam.
169. Madanadhivaman.
170. Antirheumatic (Unani) powder (Smilax chinensis).
171. Narishmba Churnam.
172. Pushyanuga Churnam.
173. Pancha kola churnam.
174. Panchanimba Churnam.
175. Saffo-fai-siah.
176 Shringyadhi Churnam.
177. Suranadhi Churnam.
178. Shadushana Churnam.
179. Vaishvanar Churnam.
180. Vadavanal Churnam.

Decoctions or quaths—
181. Bharangyadhi Kashayam
182. Calatropis gigantea.
183. Kalingakadi (C.D.)
184. Terminalia Arjuna.
185. Dasamoola Panchakoladhi Kashayam.

Third Report—cont.

186. Pathyadhi quath.
187. Sahacharadhi Kashayam.
188. Shadanga Panayam.
189. Vidarigandhadigana quath.

Ointments, liniments and lepas—
190. Avalgujadi lepa.
191. Kushtadi lepa.
192. Kursh-ai-kuba.
193. Dhanwantri thailam.
194. Paradadi ointment.
195. Prabhanjana Vimardhana.

Pills and tablets—
196. Khursai-aksirai pachis.
197. Dashanga gugulu.
198. Hubbai-jee-khun nafas (Asthma pills No. 1).
199. Hubbai jeekhun nafas (Asthma pills No. 2).
200. Hubbai safa.
201. Hubbai Javahir.
202. Khurs-ai-mulaian.
203. Khurs-ai-gull.
204. Kasis tablets.
205. Pakshavadha gugulu.

Third Report—cont.

206. Sanjivini pills.
207. Trikatukadhi gutika.

Rasas—
208. Arshakutara Rasa.
209. Gandamalakandan Rasa.
210. Grahani vajra kapat rasa.
211. Kalakoota Rasa.
212. Laxminarayana Rasa.
213. Lokanatha Rasa.
214. Mehamudgara Rasa.
215. Maha Mriganka Rasa.
216. Maha Vathavidhwamsi Rasa.
217. Panchamrita Parpati.
218. Pradararipoo Rasa.
219. Panchabana Rasa.
220. Ratnagiri Rasa.
221. Rasa Raja Rasam.
222. Shwasa Chinthamani Rasa.
223. Vishava Tapa Harana Rasa.
224. Vatha Rakshasam.
225. Vatha Vidhwamsi Rasa.

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